An Address

ON THE

PROGRESS OF SURGERY AND THE TREATMENT OF SIMPLE FRACTURES.

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MR. PRESIDENT AND GENTLEMEN,—I realise that you have conferred upon me a great and wholly undeserved honour in asking me to address you to-day, and when I recall the names of my distinguished predecessors in this office I am appalled at the serious responsibility I have incurred in accepting your kind invitation. I will not abuse your patience by vain apologies and excuses, but rather at once throw myself upon your generosity, and hope that the kindness which prompted the invitation will be extended to me throughout the address.

A surgeon to-day need have no lack of material for an address, for we who have reached and passed what has been called "the old age of youth and the youth of old age" have witnessed the rise and progress of the greatest and most beneficent advance in the art of surgery that the world has ever known. We have lived in the full flood-tide of surgical progress, and have been witnesses of a widespread change in nearly the whole of surgical practice. But I fear it is true that the treatment of simple fractures is but little better or more successful to-day than it was a generation ago, and for that reason I have ventured to choose it as my topic for this address, conscious, also, that what I say will be judged by those who have far better opportunities than I of estimating its truth and worth. The great recent change in surgical practice has not consisted merely or even chiefly in the adoption of new methods of treatment for old; such changes have been many, but they are only the outward and visible signs of the inward change in the aim, the thought, and in the very spirit of surgeons. By some this has been called a revolution in surgery—a grand upheaval, a *bouleversement*. I prefer, in spite of my critics, still to call it an evolution—the working out of the great root inspiration of all surgical art. Revolutions are not big with progress, prosperity, security, permanence; they are destructive, reversible, and opposed to the very essence of scientific progress; they are cataclysmic, volcanic. Evolution, on the other hand, is the silent, peaceful working out of the great primeval design; its steps are all forwards on the road to fullest truth; its results are irreversible. What if this change has been wrought in a single lifetime—largely by one single life—instead of being slowly and laboriously brought about by centuries? May not one day be as a thousand years?

In an address to the Medical Society of London two years ago I dwelt upon what appeared to me to be the great features of this recent evolution in surgery, and I must not be tempted into going over that ground again, fascinating as it is to me. But I want to draw your attention to three points in it, and then to show you, if I can, their application to the treatment of simple fracture. My first point is that surgeons have come to have a far higher standard by which to judge of their work than they ever had before. *Our aim is higher*, and we are all conscious of a blessed discontent with results that our fathers were well satisfied with. In nearly all directions we see the influence of this idea. The surgeon is no longer chiefly busied with lopping off useless or dangerous members, stepping in only when Nature has obviously failed, content merely to save life or relieve acute suffering. He rightly regards himself as the co-worker with Nature, whose highest duty is to complement the *vis medicatrix naturæ*, and he is satisfied only when his patients leave his hands sound and strong. Our aim to-day is our patients' cure, not recovery only, the re-establishment of perfect physical well-being, and to a large extent we are able to attain this. My second point is that surgeons nowadays recognise a heavy personal responsibility for the results of their work in the cases submitted to them. Although the surgeon's lot is a happier one to-day than ever before, because of the nearly uniform afebrile course of wounds and the speedy and painless convalescence of his patients, it is yet a fact that at no previous time has he borne so heavy a load of personal responsibility. This has come, not only from the prodigious development of the surgical art and the consequent difficulty of keeping abreast of it, but chiefly because the surgeon knows that it very usually depends upon his management of the case whether it ends well or ill. This surgical responsibility is largely a new thing, and should be never absent from our minds. It is twofold. In the first place, the work that will for ever be associated with the great name of Lister—one of the very greatest in the annals of humanity—has compelled us to make sure that our interference shall not be the means of introducing into the tissues of the body any of those potent pathogenic organisms that were the bane of surgical practice. In the second place, while we have been learning so much of Nature's power, we have come to understand the limitations of the *vis medicatrix naturæ*, and we have therefore learned both what we cannot and need not do, and what it is urgently necessary that we should do to help our patients. We have come to see more clearly that surgical art is to be, not only the ally of nature, but her complement, meeting her limitations. For instance, if we no longer speak of our treatment healing a wound, and our ointments, lotions, and potions are fast sinking into deserved neglect, it is because we know that nature does all the healing, and to her alone do we give the credit. The duty of the surgeon is to protect the body from external and accidental malignant influences, by means at once effectual and innocuous. Everywhere this rule holds good; we have to learn what nature does, and what she cannot do, where her powers are thwarted and how supported, and then the surgeon has to step in and help, taking care that it is aid and not injury that he gives. The more clearly we see our duty thus the greater becomes our responsibility. For let us not think that this is giving the surgeon's work a subsidiary place; in reality, it exalts it, his function is more limited than we thought, but in this limited sphere it is indispensable, nature cannot do our part of the task, and if we stand aside when haply by our timely aid nature might accomplish her curative task we incur a very grave responsibility.

And this brings me to my third point, which is *the very different position that surgical operations have come to occupy*. A surgical operation used to be a dangerous weapon in the hands of the most expert and skilled practitioner, and even such an one did well to hold his hand unless the necessity were well established and the attendant risks reduced to the minimum. To-day a well-planned and carefully executed surgical operation is almost a harmless procedure, and therefore to withhold its use where its success is even possible is to fail in our duty.

The recent great development of the operative side of surgical practice is due, not only to its extension to every part and organ of the body, but also to two other influences. With the safety that now attends an operation it is employed very largely indeed to obtain quickly a result that would otherwise be brought about slowly, or to obtain a better result than we could get by non-operative methods. Operations of choice or of convenience now form a very large proportion of our work, while formerly they were few, looked upon by many with grave suspicion and certainly involved the surgeon in great responsibility. Able to render assistance unattended by the terrible evils that formerly everywhere dogged his steps, he looks upon his proper work as not merely to act where unaided nature wholly fails in the conflict with disease and injury, but to assist, hasten, and improve by his art where nature largely succeeds. Closely allied to this is another factor in the great extension of operative surgery. An operation was in former times only justified when it was shown to be necessary or useful as a therapeutic measure—a mode of treatment. To-day we have such confidence in the safety of our methods that we feel justified in even resorting to the knife to gain a more perfect knowledge of our cases and to enable us to arrive at an accurate diagnosis. Diagnostic or exploratory operations are very largely resorted to, and form quite an important part of surgical practice, and it may be worth our while to discuss for a moment their scope and value.

An exploratory operation, if we use that word in its fullest significance, is of course no novelty in surgery. To

pass a probe along a wound or sinus is an exploratory operation, and to examine the bladder or uterus with a sound most certainly is. One of the glories of medicine is the fact that one after another of the great forces of nature, and one by one our sense organs, have been made our servants in the exploration of disease, and each addition to our physical methods of examination has added greatly to our diagnostic powers. Think for a moment what we owe to percussion, to auscultation, to the microscope, the ophthalmoscope and laryngoscope, to the thermometer and to the electric battery. But the exploratory operations I am referring to just now are cutting operations, the type of which is an exploratory laparotomy. I would submit that such operations are only to be approved (1) when the information they afford—an accurate diagnosis—cannot be arrived at by non-operative methods; and (2) when there is reason to believe that the exploratory operation may be converted into a therapeutic one. An exploration merely for the sake of gaining more accurate information about a case without hope of practical advantage for the patient is not justifiable, nor are such operations as can only be compared to what our legal friends would call "fishing inquiries." I am afraid we cannot in fairness deny that there has been, and is, some tendency to perform diagnostic operations without the two essential justifications I have mentioned. The ease, the painlessness, and the safety of operations, the great familiarity of surgeons with the use of the knife in all parts of the body, and the charm of a clear ocular or tactile demonstration, cannot but influence us powerfully, and if unwatched or unchecked may readily lead us astray. When it has been suggested that it is as vain to attempt to make an exact diagnosis of intra-abdominal conditions without laparotomy as it is to guess what wood a table is made of until the covering cloth has been removed, am I wrong in uttering a caution, or even in protesting that diagnostic operations must only be undertaken under the sanction of distinct and binding rules? I am anxious to put in a plea with you for the most careful, exact, and painstaking pre-operation examination of our patients. I am conscious myself, and I think I have seen it in others, of the tendency to shirk this when the case has once been shown to be one that ought to be submitted to operation. It is said, "Why waste time examining and drawing inferences about a tumour the exact conditions of which will be demonstrated at to-morrow's operation?" My answer is that time so spent is well spent in the interests of both surgeon and patient. The educational value to the surgeon himself of every effort to arrive by mental processes at an exact diagnosis is very great, and by it a mere handiworker is raised to the honourable estate of a surgeon. Again, I have been struck with this, and so must you, I am sure—that in many cases what has been demonstrated by an exploratory operation could have been definitely inferred with at least very strong probability if a sufficiently careful examination of the patient had been made beforehand and if the surgeon had had confidence in applying his knowledge. We may be sure of this—that surgery will not advance as it might unless all its practitioners train their faculties of observation and of reasoning to the highest possible pitch, and to this end make full use of the educational advantages their various cases supply. I may add, too, that some exploratory operations are very grim failures even from the surgeon's point of view; instead of clear demonstration they yield uncertainty and doubt. All riddles are not to be solved by opening the abdomen! From the patient's point of view two things may be said on this matter. 1. That an operation in itself is and always must be an evil thing, to be avoided unless its necessity or advantage is strongly probable. We none of us, I think, ever perform a negative exploration without distinct regret as well as disappointment. 2. Great elements of success in an operation are for the surgeon to recognise clearly beforehand the conditions he has to deal with, to plan out the precise steps to be taken, and to prepare to meet the particular difficulties and dangers of the case in question. The highest level of success is not attained when the operator starts with uncertain intentions and leaves his course of procedure to be determined by the exigencies of the moment. I know that this is sometimes unavoidable. I am only urging that it is a condition unfavourable to success and that we should not accept it unless forced to do so. But having said this as a plea for the most careful and painstaking examination of our patients before operation and for the cultivation to the highest possible pitch of the art of diagnosis, I must not be held to be decrying the proper use of diagnostic operations. Far from that. No one has more reason than I to know the limitations of his power of reaching without operation a distinct and accurate diagnosis in many conditions amenable to operative treatment, and the aid an open wound then affords us is very often invaluable. The regret that follows a negative exploration is, after all, much less keen than the revelation post mortem of a curable condition that a simple exploration would have revealed. In fact, it is my intention to-day to point out a direction in which I think operation may with advantage be more widely practised. And further, I think we ought to make every operation in a sense a diagnostic as well as a therapeutic measure. The tendency to error is so great that, whenever possible, the occasion of an operation should be utilised to confirm or correct our previous diagnosis, lest, proceeding upon an incorrect view, we apply an ill-adjusted remedy. Forgive me for offering to you these simple, trite reflections. The obvious is not always the most heeded! This is moreover a digression, for the point I want to make is this—that as a surgical operation has come to be very largely a harmless proceeding it is justifiably used more widely and to meet less urgent indications than was formerly the case.

I must now pass from these general observations to their application to the special subject that I wish to speak on this evening—*The Treatment of Fractures*. This is one of the most ancient branches of surgery. It is of great practical importance to the community, and as difficult as it is important, and so wide is it that it personally concerns nearly every member of the profession. Any one of these reasons would be a sufficient warrant for my choosing it as my theme to-night. But the real reason of my choice is this: the great surgical progress, in which we all rejoice, has taken place in connexion with open wounds, and the interest of surgeons has largely, almost exclusively, centred in accidental and operation wounds, and so it has come about that while there has been the greatest activity in extending the area of surgical interference by operation and in perfecting our treatment of wounds there has been no corresponding zeal shown in attempts to deal more satisfactorily with simple fractures, although they are so frequent and so grave in their results. The great stream of surgery has flowed on, ever widening and increasing in force and beneficence. But fractures have got into a quiet, almost stagnant backwater. I want to-night to drag them out of this, and to show that from our present vantage ground we can and ought to improve the treatment of fractures. It will be well for us to try to appreciate the causes that have been at work to hinder the treatment of simple fractures sharing in the great surgical revival of the last few years. Among these causes I think the first place must be given to the idea underlying the use of that word "simple." The old surgeons were right when they separated all fractures into two groups—those in which there was no wound leading from the surface of the body to the broken bone, and those in which there was such a wound. They were right, too, in expressing this difference by using such very strong terms as "simple" and "compound." We, without their terrible experience of the different results in the two classes of cases, but who have the key to the problem, and understand at any rate much of the cause of this difference, would find it difficult to fix upon words strong enough to express this difference. With the "simple" fracture were connected in the surgical mind the great ideas of safety to life, uninterrupted welding together of the broken fragments, and more or less perfect recovery. With the "compound" fracture were connected the ideas of hæmorrhage (primary and secondary), suppuration, sloughing, necrosis, blood-poisoning in its many forms, erysipelas, gangrene, greatly delayed union and often non-union, amputation, and, too often, death. Thus the accidental entirely overshadowed the fundamental, and, led away by this, the simple fracture came to be regarded as a simple injury in many senses of the word, requiring little skill in treatment, attended with little risk of functional disability, and almost a *noli me tangere*, lest the surgical "touch" should convert the harmless "simple" into the dreaded "compound" injury. As evidence of this subtle influence of a name and an idea, see how simple fractures are treated in our hospitals. I think I am correct in saying that they are almost universally handed over entirely to the house-surgeons and the dressers, and the surgeons themselves do not regard them as cases requiring their personal attention and care. The public, too, have the belief that anyone can set and treat a simple fracture, and

to fail in this is at once a demonstration of incapacity or even of malpraxis. I would submit that our error has lain in the too low ideal of excellence by which we have chosen to judge of our results and in failure to appreciate the part we have to play in the treatment of a fracture. Our standard of success or failure has too often been the firmness of the union of the fragments of bone, with, in some cases, a quite subsidiary regard for obvious deformity of the part. But the real standard by which we ought to judge our results is the perfection of function of the part. That point is very simple, and you will no doubt admit it at once, but think of the number of patients who recover from a fracture with more or less permanent impairment of the use or function of the part! How often do patients forget even on which side of a limb or of their body some extensive wound of the soft tissues was—so entirely oblivious of it are they long years afterwards! How rarely do we find anyone equally oblivious of the seat of an old fracture! We must not rest content until we obtain as perfect results in the one case as in the other. Now, this improvement will not come through any new power in nature to deal with these cases, but simply waits for us to do our part in the matter better and with more deftness and skill. Mr. Arbuthnot Lane has attempted to express the loss of function after a broken leg in terms of pounds, shillings, and pence, and he has at any rate shown that a working man's earning power—his market value—is often seriously diminished by an injury that has been repaired and that surgically seemed of secondary importance. We see, then, the application of my first point. We have to apply to the treatment of fractures the higher standard of excellence that we apply so largely elsewhere. We must aim, not at union merely, but at *perfect restoration of function*. Upon what does the perfect restoration of the function of a broken bone depend? First and foremost upon the perfect structural repair of the bone. The relation between structure and function is intimate and ultimate; we are unable to go behind it and explain it, but have to accept it. A very apt illustration of this is seen in the structure of voluntary and involuntary muscle. Chemically all but identical and developed from the same embryonic layer of cells, we might have expected that the one difference between them would be in their nervous connexions, but instead of that we find a striking difference in the intimate structure of their fibres; and the structure of heart-muscle standing intermediate between voluntary and other involuntary muscle shows us how intimate is the relationship between structure and function. We are apt to forget, I think, that this close relationship holds true of bone also. Each bone is exquisitely adapted for its special function, not only by its coarser features—its length and general contour, but also by the disposition of its compact and cancellous tissue, and even by the exact arrangement of its lamellæ; and we cannot interfere with its structure without a corresponding loss of function, and so, if we are to treat fractures well, we cannot be too deeply impressed with the absolute necessity of securing perfect structural restoration of the bone, and not merely firm union. If we ask, How is this perfect repair to be obtained? the answer is, By the bony union of fragments that have been exactly replaced in position. The part that nature takes in the repair of a fracture is the welding together of the fragments into a more or less compact and firm mass of bone, and wonderfully and beautifully is her part accomplished. Our art is here wholly powerless; we cannot replace nature, we may by meddlesome surgery impede her, but at our best we can do little, if indeed anything, actively to aid her. What nature cannot do is to restore to their correct position misplaced fragments. Art can do this—it is her chief part; and when art performs her part as perfectly as nature almost invariably does hers the result is entirely good. This, then, is the surgeon's share of the task.

I have ventured to bring from the Middlesex Hospital Museum a few specimens of old fractures, such as are to be found in all pathological collections. They are generally used as examples of the powers of nature in healing a broken bone; they show us overlapping ends of bone firmly welded together, comminuted fractures with wide separation of the fragments all united again into a solid, resisting bone; they show us, too, the opened medullary cavity securely closed over, and sharp, projecting angles rounded off. For all this they are worthy of admiration. But I have brought them down to show not as feats of nature, but as failures of the surgeon. Each of these specimens tells of a tragedy, of an useless limb, a marred and impoverished life, and all not because nature failed in her part, but because the surgeon failed in his share of their combined work. With the exception of some few cases of ununited fracture, probably also of some cases of fracture into joints and of cases of separation of epiphyses, imperfect functional results of simple fractures are due to failure on the part of the surgeon. I do not say culpable, blameworthy failure, but I want to make it clear that in no case submitted to a surgeon is his responsibility for the ultimate result greater and more direct than in the case of a broken bone. In no case are his duties more important or more necessary if perfect success is to be attained. If this is so I think I have made good my point that a surgeon ought to approach the treatment of a fracture with the same sense of great personal responsibility that he does the treatment of a wound in the soft parts. If the standard of success to strive after has been correctly stated, and if the surgeon's share in attaining it has been duly estimated, you will agree with me that fractures, even if surnamed "simple" are not trivial cases, and in many instances their treatment will tax the ability of the most gifted surgeon, and in some cases baffle all his efforts. We may, however, be sure of this—that nothing has so tended to paralyse us as a conviction—too widespread—that the difficulties presented by fractures are often insuperable, and that it is no reflection on our art to be vanquished by them. Nothing will help us to overcome these difficulties more uniformly and well than a clear appreciation of their nature, of their importance, of the great limitations of the power of nature to cope with them, and of our correspondingly great responsibility. Realising our duty and with faith in ourselves what means can we adopt? what snares avoid? 1. In the first place, we should always do our utmost to make an exact diagnosis of the condition of the bone; not merely of the fact and position of the fracture, but of the number and position of the fragments and the plane of the fracture. In arriving at this we have two great helps. The chief of them is anæsthesia. A recent fracture is a very painful injury, and the manipulation necessary for its exact diagnosis may cause great suffering. I am convinced that it is as much the surgeon's duty to give an anæsthetic to assist him in arriving at his full and exact diagnosis in such a case as in any of the more grave surgical conditions, and of course the anæsthesia which permits of the diagnosis will also greatly facilitate the proper treatment. I believe this teaching would be considered rank heresy by many, but I am convinced of its soundness. The second great aid will be afforded by the x rays and the fluorescent screen. At present this means is the luxury of the few, but the time will come, I hope, when we shall all be able to avail ourselves of its aid in the cottage of the miner as well as in the fully equipped hospital. 2. Having arrived at a full and correct diagnosis, the next point to attend to is to reduce the fragments at once, at the earliest possible moment, remembering that lapse of time always increases the difficulties in doing this, never lessens them, and soon makes them insuperable. 3. This reduction of the fragments must be complete or perfect at once; we must not rest in any halfway house, content with improvement to-day in the hope of still further correction to-morrow. Such is, I believe, an entirely bad practice and a most fruitful source of error and ultimate failure. We are all conscious of the temptation to be satisfied with less than ideal success, but here it is courting failure. I appeal to your experience, necessarily much larger than mine, whether I am not right in insisting upon this point, and whether you have not found that only when reduction is complete is the patient comfortable, and are the fragments easily retained in position. 4. This latter point is specially worth remembering. We often hear of fractures being "set," and of the fragments slipping away again. This undoubtedly occurs. But fortunately the surfaces of a fracture are nearly always uneven, or even considerably jagged; and it follows from this that when these surfaces are *really accurately fitted together they hold together;* and it is worth bearing in mind that recurrence of displacement generally means imperfect reduction, while conversely perfect replacement is in nearly all cases the greatest aid to the subsequent maintenance of the bone in the correct position during healing. The transverse fracture of the patella is of course a striking exception to this rule. 5. The means best adapted to secure this perfect adjustment of the fragments vary with different cases. The causes of the displacement are either the

fracturing force, the action of gravity, or the pull of muscles. Success in correcting it is best attained by a careful study of each case. We should always try to overcome the action of the muscles by relaxing them, and not by opposing their pull by extension and counter-extension. For this purpose surgical anæsthesia is of the utmost value, and I am of opinion that it is used far too little both for diagnosis and treatment of fractures, and that we ought to use anæsthesia for these purposes in all but the very simplest cases. I was taught, as many of you doubtless were, that it was exceedingly bad practice under any circumstances to give an anæsthetic for the setting of a simple fracture, lest in some unconscious movement the patient should thrust the broken bone through the soft parts. I first unlearned that lesson years ago when a distinguished American surgeon came to me with a broken wrist and insisted on treatment that should certainly restore to him an agile right hand, but by painless surgery. 6. Another point I think of primary importance is to replace the fragments before applying the splints or bandages. The proper use of a splint or other retentive apparatus is to assist in keeping the broken bone immobile while nature is completing her task of uniting the fragments. For this purpose they are excellent; but whenever we trust to them to correct the displacement we are doomed to disappointment. Let me mention one or two familiar examples. Look at the very numerous apparatus for the treatment of fractures of the collar-bone, all of which are supposed to aid in forcing the fragments of the bone into their proper position. What miserable failures they all are! Whenever we are very anxious to obtain repair of this fracture without deformity we discard the whole of them and place our patient flat on his back in bed. Again, what a failure it is attempting to correct the deformity of Colles's fracture by a pistol splint, Gordon's splint, or Carr's splint? But if we first of all correct the displacement and then maintain the fragments in their proper position by resting the limb on either of these splints we at once obtain excellent results. Or, who has seen an oblique fracture of the shaft of the femur recover without any shortening by the use of a long splint and extension? The fact is that the most extraordinary ingenuity has been expended in efforts to make splints and bandages do what they are not intended to do and are not capable of doing. Failure lies that road and we must avoid it. Full success is only attained when the surgeon first reduces the displacement and then secures the part in his splint. The cases in which we fail and which give us the most anxiety are just those where we are unable to do this. 7. Into the details of splints and bandages I cannot enter; nothing is better than a well-fitting Croft's splint, and the more nearly any other splint approaches to the effect this gives the better it succeeds. Nor will I take up your time with any words on the value of passive motion, frictions, and careful use of the limb as soon as the union is strong enough to withstand the strain thus thrown upon the particular bone. For I want, in conclusion, to discuss what part operative interference may play in the treatment of fractures. Should we, or should we not, extend to fractures the same development of surgery that we have step by step extended to other injuries and diseases? Thus stated the question contains its own answer. Let us, first of all, be quite clear as to what operation can do for simple fractures: (1) it can exactly replace fragments in their proper position; and (2) it can mechanically fix them until the natural process of ossification is complete. In old ununited fractures it in addition opens up again the medulla from which the plastic callus is formed. Now, at the outset we ought to bear in mind one or two very grave considerations. 1. It goes without saying that such an operation must only be undertaken under conditions ensuring an aseptic wound. If a simple fracture is ever transformed by the surgeon into a compound fracture it must be done only when all the special evils attaching to compound fractures can be absolutely excluded. 2. The exact fitting together of the fragments may be exceedingly difficult. All fractures are not like transverse fractures of the patella; many, indeed, are worse to piece together than any Chinese puzzle. 3. And even then the difficulties are not at an end, for our surgical means of holding fragments together are imperfect and in some cases very difficult to apply. 4. In fact, except in such cases as the patella or in uncomplicated oblique fractures of the tibia these operations are of extreme physical difficulty and, like matrimony, are "not to be enterprised nor taken in hand unadvisedly, lightly, or wantonly."

My own conviction is that with due care and perseverance, particularly with the aid of an anæsthetic, the cases in which the surgeon is unable to do his duty by exact replacement and fixation of the fragments are very few. But in those few cases I think it is incumbent upon the surgeon to put to himself the question whether the difficulties he meets with can with reasonable certainty be overcome by an operation. If they can and he has all the requisite means at command it is his duty then to operate. He must be prepared to meet with considerable difficulties, and he must act with a clear and full recognition of his responsibilities. I would not for one moment advocate a general or a frequent employment of operations for simple fractures. Such a practice I hold to be needless, dangerous, and ill-advised. But, on the other hand, I am prepared to contend that when other means fail to give us that result for which we should always strive and which our patients ought to demand of us, a serious responsibility is laid upon us if we withhold from them the aid an operation may afford. I admit that here I am not on very firm ground, although I anticipate that in the future this position will in the main be generally held; but I am on quite solid ground when I plead for the general adoption of a higher standard of excellence in the repair of simple fractures and to this end urge the free use of anæsthesia and the most patient and careful efforts in their setting.

SEVEN CONSECUTIVE CASES OF INTUSSUSCEPTION IN INFANTS TREATED BY ABDOMINAL SECTION, WITH SIX RECOVERIES.

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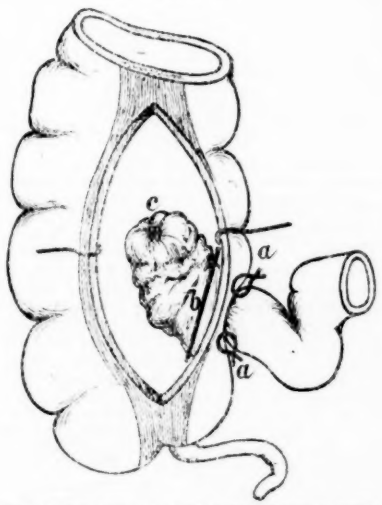
THE following cases have been under my care either at the Hospital for Sick Children, Great Ormond-street, or at St. Thomas's Hospital between 1893 and the present time. No one with any experience of the treatment of intussusception would expect such a favourable record to be maintained. Some cases are almost hopeless from the first moment they are seen in hospital. A run of successful cases must depend either upon immediate treatment or the fortunate absence of severe damage to the bowel. Until the last few years it has been the practice to exhaust all other methods of treatment before abdominal section was resorted to, and it is not surprising that a successful case of surgical interference was most exceptional. Physicians, under whose care these cases are generally admitted, now employ inflation and manipulation only when the patient is in good condition and has come very early under observation, and are satisfied that abdominal exploration should be undertaken without delay if complete reduction is not at once brought about. In all the acute cases now recorded the physician in charge requested the surgeon's immediate attendance, and to this saving of valuable time the successful results must certainly be attributed. Children under one year of age are commonly supposed to be unfavourable subjects for abdominal exploration. With proper precautions, however, abdominal section may be performed without great risk from shock, but the temperature of the body must be maintained by wrapping the extremities in cotton wool, operating on a hot-water cushion, and taking care that the manipulations are carried out quickly and with great gentleness. The seven cases may be divided into two chronic and five acute. The average age of the acute cases was nine and one-fifth months. The chronic cases are of special interest, since it was necessary to incise the colon and remove irreducible bowel in each instance.

CASE 1. *Chronic intussusception (one and a half years' history); removal of intussusception through the colon.*—The patient, a male child, aged two years and three months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow, on March 11th, 1893. The mother stated that the child was fed on the breast till the age of thirteen months. When nine months old he had a sudden attack of abdominal pain, with sickness and passage of blood with his motions. A similar attack occurred at the age

of twelve months, and a lump was then noticed on the right side of the abdomen. Since that time he had had four or five attacks of a similar character. At first the child appeared quite well between the attacks, but of late he had suffered from constipation and occasionally from diarrhœa. On the Monday before admission he was seized with pain in the abdomen, and on the Tuesday morning passed blood with his motion. The abdominal pains continued, and after two days sickness commenced. As the attack did not seem to subside the mother determined to bring the child to the hospital. On examination the patient was found to be a fairly well-nourished child with a small moveable lump in the right hypochondrium. The abdomen was not distended, the walls were flaccid, but there was some tenderness over the position of the lump. The child remained under observation and careful feeding from March 11th to the 27th, and during this fortnight had frequent attacks of pain, accompanied by sickness. Several well-formed motions were passed, but they were always streaked with blood. The abdominal lump varied considerably in size and position and could occasionally be traced for a short distance along the transverse colon. On March 20th an examination was made under chloroform and the lump could then be felt to the left of the middle line, but on manipulation seemed to lessen and to take up a position corresponding to the ascending colon. On the 27th it was, after consultation, determined to explore the abdomen as the child was losing power; the attacks of pain were more frequent; some distension of the abdomen

FIG. 1.



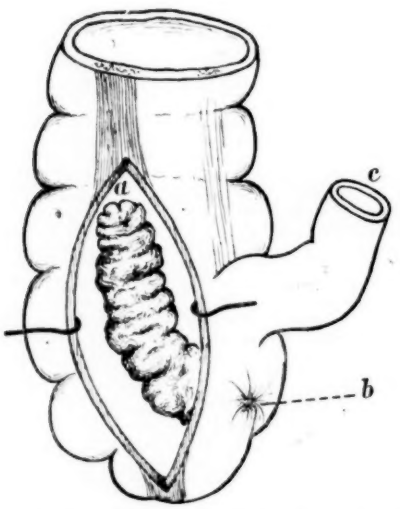
Cæcum laid open from the front to show ileo-colic invagination. *a*, Sutures introduced round neck of intussusception. *b*, Line along which intussusception was removed. *c*, Apex of intussusception.

was now also present, and the difficulty in getting the bowels open by enemas was increasing. During the week preceding operation the temperature varied between 97° and 100° F. and the weight had fallen from 1 st. 12 lb. to 1 st. 9 lb. On the afternoon of the 27th an incision 2½ in. in length was made in the right semilunar line with its centre slightly below the level of the umbilicus. The tumour was readily brought out of the wound, and found to be an intussusception of about two inches of the ileum into the cæcum. The appendix was not engaged, and the intussusception was of the ileo-colic variety. A vertical incision two inches long was now made in the commencement of the ascending colon; the intussusception was found to be thickened and solid, resembling very much an os uteri in appearance. The mucous membrane covering it was much ulcerated, and the lumen was reduced to the size of a goose quill. Reduction was quite out of the question, and it was necessary to remove it. The ileum above the affected part was carefully stitched (Lembert's sutures) to the large bowel, and one and a half inches of intussusception were then cut away with scissors. The mucous coats were secured within the colon by interrupted silk sutures, and the lumen examined and found with a little stretching to admit the forefinger. The child stood the operation well considering its severity; his pulse, which was not good at the commencement, became feeble when chloroform had been administered for three-quarters of an hour, and ether was substituted as the anæsthetic. Fig. 1 shows the appearance when the colon was incised and the margins of the opening retracted. The temperature in the evening was 102·4°, but fell to normal on the next morning. Convalescence was steady. After the operation no more blood was passed with the motions, and the attacks of pain entirely ceased. During the following year, on several occasions the child had to be treated in hospital for constipation, which was overcome by abdominal massage and administration of salad oil. He has developed into a fine, healthy boy, and was last seen on Feb. 7th, 1897. The cicatrix was perfectly sound, the abdomen normal, and he was attending a board school. No stricture can therefore have developed at the line of resection. In this case it is probable that the intussusception which occurred at the age of nine months never completely went back, and during the next one and a half years there was a constant tendency to recurrent attacks and the gradual closure of the lumen of the intussusceptum. The hæmorrhage was explained by the ulcerated condition of the mucous membrane about the orifice of the lumen. Such a complete stenosis was not anticipated before the exploration owing to the character of the motions, which were generally well-formed. The formation must have occurred after passing the strictured bowel. The case was, in fact, thought to be one of recurring intussusception due to the probable presence of a polypus. It was only after a fortnight's observation in hospital that operation was decided upon, for it was felt that interference must be attended with considerable risk. The advantage of dealing with such a condition by resection through the colon as originally suggested by Mr. Barker is obvious, and lessened the risk of resection very greatly.

CASE 2. *Chronic ileocæcal intussusception due to a complete inversion of the appendix; removal of the appendix through the colon.*—The patient, a pale, cachetic female child, aged two and a half years, was admitted to St. Thomas's Hospital, under the care of Dr. Acland, on Jan. 13th, 1897. Three and a half months before she had been playing about on her bed, turning head-over-heels. She seemed quite well, and directly afterwards had her dinner, which she vomited, and then complained of pain in her stomach. Next day she repeatedly had spasms of pain of short duration. These attacks continued for many days. The bowels were relaxed and considerable quantities of blood and slime passed. The mother did not notice any swelling of the abdomen, but it was hard and rigid during the attacks of pain. Food was taken well without sickness. She was treated by several medical men, who diagnosed her case as one of gastric catarrh. On Dec. 29th, 1896, the mother found that her bowel had come down, and called in Dr. Ford, who found an intussusception protruding four inches beyond the anus. He could feel a tumour in the abdomen by palpation. After reducing the rectal protrusion the child was inverted and kneading of the abdomen commenced. Suddenly a gurgling sensation was felt, and the abdominal tumour entirely disappeared. Dr. Ford sent the child to St. Thomas's Hospital, and she was kept under observation till Jan. 2nd. During these few days nothing abnormal was discovered; the motions were normal and free from blood or mucus. The very day she left the hospital the pains returned, and were specially severe when walking about. On Jan. 4th the bowels were very loose, and blood and slime were again noticed with the motions. The symptoms continued till Jan. 13th, when the mother noticed that her condition was much worse. On re-admission to the hospital on the evening of the 13th Dr. Toller, the resident assistant physician, examined her under an anæsthetic, and felt a sausage-shaped tumour in the position of the transverse colon—the tumour was freely moveable—and seemed to alter in size and position. The abdomen was somewhat distended, but the child's general condition was good. At 11 P.M. she was again placed under chloroform and an incision made in the middle line just below the umbilicus. The small intestines were found to be full of fluid contents, and in the mesentery of the small bowel numerous caseous glands were to be seen about the size of cobnuts, and a few small nodules like tubercles on the mesenteric border of the bowel. The omentum was adherent to the mass of enlarged glands and the upper part of the abdomen shut off. These conditions at first suggested that

the tuberculous condition present might account for the symptoms, but as the cæcum could not be found it was thought right to explore further, and after separating the omental adhesions with some difficulty the transverse colon was reached and drawn into the wound. The presence of an intussusception in it was then discovered, and with gentle manipulation this was easily reduced. It was noticed that after apparent complete reduction no appendix was visible. At the position where it should normally be attached was seen a dimple; here also was the base of its mesenteric attachment. On examination of the cæcum an elongated swelling could be felt within it resembling a thickened appendix. A vertical incision two inches long was now made, having its centre at the junction of the cæcum and ascending colon, and a chronically thickened and completely inverted appendix was found. All attempts at reduction failed, so the appendix was cut away and its base sutured, and then further secured by stitching the peritoneal coat of the cæcum over it. The incision in the large bowel was sutured and the abdominal wound closed. The child was kept under the influence of small doses of tincture of opium. Recovery was uninterrupted, the abdominal wound healing by first intention. The last note is on February 10th. The child was quite well and in good spirits, but still kept in bed on account of the tuberculous condition discovered at the

FIG. 2.



Cæcum laid open on its inner side to show invagination of the vermiform appendix. *a*, Apex of invaginated appendix. *b*, Depression in cæcum indicating attachment of appendix. *c*, Lower end of ileum.

operation. The temperature had been normal since operation. The diagram shows the appearance after reduction of the intussusception and retraction of the sides of the incision in the large bowel.

Remarks.—It is highly probable that some condition of irritation within the appendix caused it to turn inside out as the first commencement of trouble. The inverted appendix then acted as a polypus within the bowel, and produced the ileo-cæcal intussusception for which she was treated by Dr. Ford. A chronic recurrent form of intussusception followed; but fortunately no adhesion formed, and the reduction at the time of operation was easily effected. The removal of the appendix was necessary for a radical cure. It is to be hoped that as a result of the thorough examination of the abdomen, and the prolonged rest and after-treatment, that the commencing tuberculous lesion will be arrested. The group of enlarged glands were in the mesentery of the small bowel, far away from the seat of intussusception, and evidently quite unconnected with it.

The following five cases of abdominal section for acute intussusception are given very briefly.

CASE 3.—The patient, a male child, aged nine months, was admitted to the Hospital for Sick Children, Great Ormond-street, on March 11th, 1895, under the care of Dr. Penrose. He was found to be a well-nourished child with a history of being languid and out of sorts for four days. During the twenty-four hours preceding admission the child had suffered from abdominal pain; he had vomited after food and had passed three motions containing blood. On examination the abdomen was not distended, but an indefinite tumour was to be felt on the left side. Dr. Penrose saw the child at 1 P.M. on the morning of admission, and under an anæsthetic the colon was distended with warm water and the tumour seemed to disappear. As the condition of the child was not quite satisfactory, an examination under an anæsthetic was again made at 3 P.M. and a swelling detected in the splenic region. A median incision was made and an intussusception discovered and reduced after some few minutes of traction and compression. It was of the ileo-cæcal variety, a portion of the ileum with the cæcum and appendix being engaged in the colon. The bowel was very œdematous, and the chief obstacle to final reduction was the invaginated mesentery, which contained some enlarged glands. The thickened ileum after reduction was greatly indented by the pressure of these glands and showed no sign of resilience. Recovery was uninterrupted. The child was discharged well on April 24th, 1895, and was kept under medical observation for the next six months.

CASE 4.—The patient, a male child, aged one year and eight months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow on Dec. 17th, 1895. The patient had been quite well until Nov. 30th, when, while being nursed, he stretched himself back over the arm of his nurse and tried to get free Shortly afterwards he vomited, and again the next morning, but he did not seem to be in pain. On Dec. 1st attacks of abdominal pain commenced and blood first appeared with the motions. Sickness and attacks of pain continued up to the time of admission. On examination no distension of the abdomen could be found, but just above the umbilicus, running transversely in the direction of the transverse colon, a sausage-shaped tumour was to be felt—at times the swelling became harder to touch—and easily visible. His general condition was good, considering the many days' history of pain and sickness. In the evening, after consultation with Dr. Barlow, an incision was made in the right semilunar line. An ileo-cæcal intussusception was found and somewhat easily reduced, the chief obstacle again being the presence of enlarged mesenteric glands. Recovery after operation was perfectly satisfactory; but on Dec. 31st, when about to leave the hospital, he developed varicella, and was detained in hospital till Feb. 1st. He was re-admitted with a severe attack of diphtheria on April 10th, and discharged again on June 8th. He had remained perfectly free from any intestinal trouble, but there was a little bulging at the lower part of the operation cicatrix. Considering that definite symptoms had been present for a fortnight this case might almost be classed under the head of chronic intussusception. Great difficulty in the reduction was expected, but reduction was, in fact, easier than in any of the other cases.

CASE 5.—A male child, aged ten months, was admitted to St. Thomas's Hospital under my care on March 2nd, 1896. Three hours before admission, after vomiting a large quantity of undigested milk, the child passed blood and mucus from the bowel and was in evident distress. On admission the child was in a condition of shock. A typical tumour could be made out through the abdominal wall, and the top of the intussusception could just be felt within the rectum. Five hours after the first onset of symptoms chloroform was administered and inflation of air tried. By this means, combined with manipulation, the tumour was reduced to the middle of the transverse colon, but could be persuaded no further, so abdominal section was at once performed through the mid-line below the umbilicus. The tumour was delivered through the wound and finally reduced with great difficulty, taxis having to be employed on the gut for quite a quarter of an hour. The ileo-cæcal valve was especially œdematous. The bowels were opened regularly every day after operation, the first motion passed containing some dark blood. Recovery was completely satisfactory and the child was discharged cured on March 30th. Air inflation in this case was most fully and carefully tried and was expected to succeed, since the symptoms had only existed five hours. The reduction was the most difficult of the acute cases, and there can be little doubt that if the child had not been brought at once to hospital it would have speedily been impossible. This case

was reported in the *St. Thomas's Hospital Gazette* of March, 1896, by Mr. Abbott, together with two other successful cases by Mr. Clutton and Mr. Makins. Some of Mr. Abbott's remarks have been used in the concluding suggestions.

CASE 6.—A male child, aged ten weeks, was admitted to St. Thomas's Hospital, under the care of Dr. Acland, on Nov. 24th, 1896. The child had not passed anything by the bowel for six days—viz., since Thursday, Nov. 19th. He had been seriously ill all that time, refusing food and vomiting for two days. On examination the abdomen was found to be uniformly distended; no tumour could be felt. The finger after introduction into the rectum was covered with mucus. The pulse was very rapid, and the general condition extremely bad. After consultation with Dr. Acland it was determined to explore, and a median incision was made below the umbilicus. The small intestines were found to be greatly distended, and on the most gentle manipulation the peritoneal coat split in several places. A small incision was made into the distended small bowel, and a considerable quantity of fluid fæces were evacuated. This incision was then sutured, and on further examination an intussusception was found at the splenic flexure. The ensheathing bowel was very soft and gave way in the transverse colon. The intussusception was then seen to be in a state of gangrene. The child was in such a collapsed state that a prolonged operation was impossible, so the gangrenous intussusception was cut away with scissors through the opening in the colon, and then the aperture in the colon brought to the surface and an artificial anus established. Death took place a few hours later.

CASE 7.—A male child, aged five months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow, on the evening of Feb. 3rd, 1897. The child was quite well on Feb. 2nd, but about 10 A.M. on the 3rd he suddenly became pale and bathed in cold sweat, and at 12 A.M. passed blood per anum, and continued to pass blood every hour until his admission. The patient was a well-nourished child; his abdomen was soft. On palpation an elongated mass in the line of the sigmoid flexure was found. Per rectum, within easy reach of the finger, a firm, rounded swelling with an elliptical orifice in the centre could be felt. As the child strained the tumour descended almost to the anus and bright blood was passed. An anæsthetic was given at 2 A.M. on Feb. 4th, fourteen hours after the first symptoms, and an attempt made to reduce the intussusception by water pressure. The tumour receded from the rectum, but no effect was produced either by inflation or manipulation on the abdominal swelling. A small median incision was then made below the umbilicus, the descending colon was brought out of the wound, and by compression and squeezing behind the swelling the intussusception was made to travel slowly upwards as far as the cæcum. It was found to be of the ileo-cæcal variety, the mesenteric glands at the junction of the small and large bowel were considerably enlarged and caused difficulty in the final reduction. The disengaged bowel was soft and inflamed. During the next twenty-four hours two motions were passed, the first containing blood. Small doses of tincture of opium were given. The child was given the breast on the next day, but unfortunately the mother's milk supply ceased, and humanised milk was substituted. Recovery was entirely satisfactory.

Remarks on the acute cases.—It will be noticed that distension of the large bowel by air or water was tried on all the patients except Cases 4 and 6. In Case 4 symptoms had been present for over fourteen days, and in Case 6 the abdomen was greatly distended and the general condition of the child contra-indicated any attempt at inflation. Symptoms had also existed for a week. Notwithstanding the very satisfactory results obtained by laparotomy in these acute cases, and the failure to completely replace the intussusception by inflation and external manipulation, it would be wrong to argue against the trial of such measures in suitable cases. The fact that many cases of acute intussusception have been cured without operation, and the supposed great danger attending abdominal exploration in very young infants, has led in the past to a too prolonged and sometimes a repeated trial of inflation. It is not possible or right from a small sequence of cases to lay down any rules applicable to all conditions, but the following statements result from my experience derived from these cases now put on record, and, unfortunately, from many unsuccessful cases of operation previously to the year 1893.

1. In cases of recent acute intussusception distension of the bowel by air or water combined with gentle external manipulation may be tried under an anæsthetic. The surgeon should, however, be *present* and prepared to at once open the abdomen if a satisfactory result is not quickly obtained. In many cases the effect of such inflation is to reduce the main mass of the tumour, but to leave an irreducible portion in the right iliac and lumbar regions. This amount of success aids the subsequent operation and allows the tumour to be easily delivered through a smaller incision and with less manipulation. Supposing that inflation has apparently been successful the child should be carefully watched, and with evidence of continued trouble abdominal section should be resorted to and no further inflation tried. (Ex. Case 3)

2. An exploratory operation should be undertaken without preliminary inflation, when from the severity of the symptoms or the chronicity of the case there is reason to believe that such inflation would be dangerous or unlikely to succeed. It must always be remembered that the time taken up by inflation adds considerably to the shock.

3. The median incision is most suitable in the majority of cases, but when the tumour is in the cæcal region a limited incision in the right semilunar line may be found most convenient. For the reduction of the final portion of an intussusception the tumour should be brought outside the wound so that the operator may clearly see the condition of the bowel and make sure that the reduction is complete. Thickening about the ileo-cæcal valve may be easily mistaken for an incomplete reduction. When in doubt an incision may safely be made into the colon, and the parts examined from within the bowel. An incomplete reduction will certainly lead to further trouble. In some of the supposed cases of spontaneous cure, or cure by inflation or manipulation, it is highly probable that complete reduction is not effected, and the chances of recurring symptoms are therefore greater than after careful operation.

4. In none of the cases operated on by me did it seem desirable after reduction to attempt any fixation of the bowel—such as by suture of the mesentery—as a security against recurrence. Such a procedure seemed contra-indicated, since it would add to the length of the operation and must be most uncertain as to the effect produced. All the children were given small doses of tincture of opium and kept under constant medical supervision for a considerable time after convalescence from the immediate condition.

5. When reduction is found impossible a resection inside the colon would seem to afford the best chance. The junction between large and small bowel must be made secure before any part is cut away. When gangrene is present the condition in young children is almost hopeless. Complete resection and end-to-end union, whether by Murphy's button or suture, so far has been practically without success. Perhaps rapid resection, with lateral implantation of the small bowel into a healthy portion of the colon, and bringing the cut end of the large bowel to the surface as a temporary vent for the escape of flatus, would be the quickest and safest method to adopt. Safely, however, as infants stand a short operation, a prolonged one under such circumstances seems almost beyond their power.

Note.—Since the above was written, four months ago, a case of chronic intussusception in a child has been operated on by me at the Hospital for Sick Children, Great Ormond-street, but died a few hours afterwards.

Harley-street, W.

CASES OF FOLLICULAR TONSILLITIS DUE TO MILK INFECTION.

BY C. GREY-EDWARDS, B.A., M.B., B.CH. DUB.,

AND

WALTER D. SEVERN, F.C.S.,

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1. *Clinical Observations* (by Dr. C. Grey-Edwards).—On Feb. 12th last I was called to a farm to see two children and a servant. They were all sitting up, and complained of general pains about various parts of the body, headache, "chilly feelings," &c. No direct complaints were made about the throat, but my inquiries elicited that "it was a little sore." On inspection I found that the tonsils

were enlarged, red, and spotted with the soft, creamy, membranous patches typical of follicular tonsillitis. The temperature ranged from 100° to 103° F., and in each case about three days elapsed before they came down to normal. In the case of the maid there was considerable prostration and languor: she was quite unable to work for three weeks. Between Feb. 12th and 24th I attended three more cases, and four other cases occurred which I did not see. On the 20th I was called to another house and here saw a similar case of follicular tonsillitis—that of a young girl with exactly the same type of throat, whose temperature was as high as 104°. As the milk was supplied from the farm where the first cases had occurred, I recommended that all the milk used should be carefully boiled, and also that the case should be isolated as much as possible and every precaution taken to guard against a spread of the malady. On the 26th there were two fresh cases, and I then sent a specimen of some of the suspected milk to the West-end Pathological Laboratory in London for bacteriological examination. The report (exclusive of the technical detail) was as follows:—(1) Staphylococcus pyogenes aureus, present; (2) staphylococcus pyogenes albus, present; (3) streptococcus pyogenes (short form), present; (4) bacillus diphtheriæ (Klebs-Löffler), absent; and (5) bacillus tuberculosis, absent. On March 1st I saw another case from the same house, and sent a sweeping of the throat for examination. The same bacteria were found as in the milk. Three of the patients in this house had partaken of the milk, but the fourth had not, and I consider it probable that infection took place from one of the other three cases in the early stages. Three children, between the ages of two and three years, escaped altogether, owing, I believe, to the fact that their milk was invariably boiled. In addition to the above cases I was called in to one other patient with a throat of the same character, and here again the milk partaken of had been supplied from the same farm. On receiving Mr. Severn's report on the first specimen of milk I induced the farmer to have the cows examined by a veterinary surgeon, who, however, failed to detect anything wrong, and it was not until the milk from all the cows had been separately examined that the offending animal was discovered. In the milk from this cow were found the same organisms as were present in the first specimen of milk and in the sweeping from the throat.

2. *Bacteriological Evidence* (by Mr. Walter D. Severn).—It is seldom that one obtains such exactly correspondent results from bacteriological researches as have been obtained in Dr. Grey-Edwards's epidemic of follicular tonsillitis. In examining the first specimen of milk, plate and Petri dish cultivations on gelatin, agar-agar, and glycerine agar agar were made immediately on arrival, and large surfaces of Kanthack-Stephens medium and serum were well rubbed over with heavy platinum spatulæ and incubated at 37° C. Portions of the milk were also placed in sterilised strong glass tubes and rotated on a motor centrifuge, and from the resulting deposits after treatment with ether, &c., cover-glass preparations were stained and examined for tubercle bacilli and bacillus diphtheriæ. Other cover-glass preparations stained by the Gram-Weigert method were found to contain a few organisms resembling morphologically the pyogenic cocci. Numerous short and long rod forms were also present, but most of these latter were very faintly stained. In the deposits from this specimen in addition to the epithelial débris and leucocytes of the form usually found in cows' milk, there were present true pus cells, variable in shape and dimensions, multinuclear, and fairly numerous. Staphylococcus albus was the organism which greatly predominated in the first specimen of milk; streptococcus brevis was fairly numerous; while staphylococcus aureus only appeared to the number of three very distinct small orange colonies on a plate poured from 0·2 c.c. of the milk. Of the two infected specimens of milk examined this first one was by far the richer in cocci, but it also contained rather numerous decomposition bacteria, including bacterium lactis, owing to its not having been taken with any special precautions as to sterility. The gelatin plates, which were as low as attenuations from a loopful of milk, were not rich enough in colonies of the organisms sought for, while the bacillar forms present were, even at these high dilutions, too numerous. In such cultures as could be incubated at 37° C. the temperature hastened the development of the pathogenic cocci, at the same time inhibiting the contaminating bacteria, isolation becoming fairly easy. In the case of the throat sweeping no plate cultures at all were attempted. The rather large brush which was used appeared to be somewhat dry on arrival at the laboratory, so it was moistened with sterile water and well rubbed over in the following order: (1) a large glycerine-agar surface; (2) a large plain faintly alkaline agar surface; and (3) a surface of serum. Incubation took place at 37° C., and the same organisms were found again, but only two colonies of staphylococcus albus were found. Some colonies of micrococcus citreus formed were, however, easily distinguished by the size of the cocci and by the non-liquefaction of gelatin from staphylococcus pyogenes citreus. The last specimens sent consisted of one of water from a well on the farm in question, and three different specimens of milk labeled each with the name of the cow which produced it. The water was carefully examined by plate culture and may be dismissed at once as a very good water with no suspicious feature (bacteriologically). Two of the specimens of milk were also free from suspicion. The bottles containing the milk were sterilised and the specimens were taken with certain aseptic precautions; it was probably owing to this care that in the two specimens just mentioned very few colonies indeed appeared even of aerial or putrefactive bacteria; the task of working up the colonies was thereby greatly simplified. In the milk of the third cow, which we may regard as the one to which the infection has been definitely traced, the two staphylococci and the streptococcus were again found. They were, however, apparently not so abundant as in the first specimen of milk examined, and the staphylococcus albus had almost disappeared. At a rough estimation I should think, however, that the pus was not diminished in quantity. In conclusion, I would like to emphasise the necessity and usefulness of cultures made by rubbing the surface of already cooled and set agar plates with a small quantity of milk or other suspected fluid in such examinations, in addition to the ordinary plate cultures. Agar-agar of a high melting point is sometimes very difficult to maintain sufficiently fluid throughout at a temperature which is not distinctly inhibitory to pyogenic cocci at their first critical transition to saprophytic growth. It is also necessary to make quite sure of the identity of any cocci found by morphological appearance and aggregation, by staining reactions and by careful micrometer measurement, by culture characteristics, and finally, if necessary, by inoculations.

THE ANTITOXIN TREATMENT OF DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

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THE treatment of diphtheria by antitoxic serum is still held to be on its trial, and therefore any results of such treatment appear worthy of record. The cases dealt with in this paper are those admitted to St. George's Hospital during the period October, 1894, to June, 1896. The injection of anti-diphtheritic serum was the routine treatment and a bacteriological diagnosis the rule; but both were subject to many exceptions. In the earlier months of the treatment the slight cases were frequently not injected. Owing to a change of registrars, due to severe illness, in 1895 the case records were for some time irregular, and it has been necessary to reject certain cases from consideration, though they would have had a favourable result on the statistics of treatment. The serum employed was in all cases that supplied by the Institute of Preventive Medicine and the seat of injection the flank or abdomen. In one case only did any septic accident occur; in this case a small abscess formed at the seat of injection, but was followed by no further ill effects. The following table shows the number of patients admitted as cases of diphtheria during the years 1891–1895, together with the first six months of 1896. The percentage of deaths and recoveries in each year is also shown. The diagnosis

throughout rests on clinical grounds, and the results of each year are strictly comparable:—

TABLE I

Year.	Number of Admissions.	Recoveries.	Deaths.	Percentage of Recoveries.	Percentage of Deaths.
1891...	27	19	8	70·3	29·7
1892...	18	8	10	44·4	55·6
1893...	83	51	32	61·4	38·5
1894...	62	47	15	75·8	23·8
1895...	152	122	30	80·8	19·2
1896*	70	60	10	85·7	14·3

* Six months.

This table shows a great increase in the number of cases of diphtheria since 1892—an increase now well recognised—and a fall in the percentage death-rate during the last three years. This fall is coincident with the introduction of the serum treatment. The year 1892 is remarkable for the paucity of the cases and the high mortality. Of the 10 cases which died 8 were tracheotomised and only one recovered. Since October, 1894, there were admitted 241 cases with the provisional diagnosis of diphtheria, and of these 180 cases were examined bacteriologically or treated with antitoxin. The 180 cases are grouped in Table II.

TABLE II.

Bacteriological diagnosis.	Number of cases.	Number injected.	Recoveries.	Deaths.	Percentage of Deaths.
Positive	112	76	90	22	19·6
Negative	49	16	48	1	2·0
Doubtful	6	4	6	0	—
Omitted	13	13	10	3	23·0
Total	180	109	154	26	14·4

Of the 167 cases bacteriologically examined the diphtheria bacillus was found in 112 cases, or 67 per cent. The agreement between the clinical and bacteriological diagnosis is really closer than appears from these figures, as in many of the 49 in which the diagnosis was negative the examination was made as a measure of precaution; 8 of them were out-patients and never admitted. Amongst the 76 cases which were injected and in which the diagnosis was confirmed bacteriologically there were 15 deaths, or a percentage of 19·8. This percentage death-rate is practically identical with the death-rate for the total cases admitted from 1894 to June, 1896. This indicates an improvement since the introduction of the treatment, as amongst the total cases there are many which were not diphtheria; but it is impossible, owing to the previously mentioned irregularity in the records, to actually compare the figures between the treated and untreated amongst the cases in which the bacillus was found. The following table shows the death-rate in various age periods amongst the cases treated by antitoxin:—

TABLE III.

Age.	Diagnosis confirmed.			Diagnosis unconfirmed.		
	Number of cases.	Deaths.	Percentage of deaths.	Number of cases.	Deaths.	Percentage of deaths.
Under 1 year	1	0	0	—	—	—
1-2 years	7	2	28·6	6	2	33·3
2-3 years	11	2	18·8	2	1	50·0
3-4 years	9	1	11·1	3	0	0
4-6 years	20	7	35·0	9	0	0
6-10 years	15	2	13·2	4	0	0
10-20 years	8	1	12·5	6	1	16·6
Over 20 years ...	5	0	0	3	0	0
Totals	76	15	19·8	33	4	12·0

The general opinion of the physicians employing the serum has been that the need for tracheotomy in even severe cases of laryngeal obstruction is now much less frequent than formerly. If the need did not arise immediately on admission it rarely did so later, when the serum had been used. As a result, the local treatment of the throat has become much less active.

Effect on tracheotomy.—The operation was performed thirty-five times, with 42·8 per cent. of deaths. Of 27 cases treated with antitoxin 9 died—mortality 33·3 per cent.; and of 8 not treated six died—mortality 75 per cent. Amongst the 8 untreated cases were of course some desperate ones, which nothing would have saved, but, on the other hand, 2 cases are included amongst the treated who recovered from the tracheotomy but died subsequently from paralysis. That the treatment has improved the chances of cases requiring tracheotomy is very strongly impressed on all who have had to deal with such cases, and this impression is confirmed by the above figures and a comparison with former statistics. In the three years 1891-93 there were 38 cases with 27 deaths—a mortality of 71 per cent., as compared with 33·3 per cent. amongst those treated with antitoxin. The mortality amongst the untreated cases has remained practically constant (from 71 per cent. to 75 per cent.).

The amount of serum used varied from 5 c.c. to 60 c.c. The usual quantity was 30 c.c. given in two injections—20 c.c. the first day and 10 c.c. the second. The maximum amount used at one time was 20 c.c. The date of the injections varied from the second to the ninth day of the disease. No general connexion between the date of the injection and the therapeutic result can be drawn from the figures.

Immediate effects of the injection.—The most striking effect is the rapid clearing of the throat. The charts of the cases reveal no immediate effects on the pulse, respiration, or temperature, though the period of pyrexia is materially shortened. Albumose was found in the urine in eight consecutive cases on the day following the injection. Unfortunately, this point has not been regularly investigated.

Remote effects.—These include the now well-known rashes and pains in joints. A rash of morbilliform character was seen in several cases, preceded by an urticaria lasting two or three days. Constitutional disturbance, evidenced by increased rate of pulse and respiration and rise of temperature, is by no means an uncommon accompaniment of the rash, and may precede it by several days. A rise of temperature without a rash may occur about the seventh or eighth day, this being the usual time at which the rash appears after the injection. The earliest day on which the rash was noted was the third and the latest the eighteenth. A second and even a third period of eruption and constitutional disturbance has been observed, but occurs rarely. A rise of temperature accompanied the rash in 40 per cent of the cases. Paralysis occurred in 21 of the injected cases and 6 died. Two of the fatal cases had been discharged as cured, and some of the others had also been discharged, so that it is possible that more cases of slight paralysis occurred than appears from the above numbers. In one case the bacteriological diagnosis had been negative. Albuminuria seems to have been unaffected by the treatment in either sense.

There remain to be noticed a few detached points of interest. One case of relapse or second infection occurred. A child, six years of age, was admitted with a second attack thirty-four days after her first admission. On both occasions the bacillus diphtheriæ was found. A child, apparently healthy except for a "cold" in the head, was the source of infection for two other members of the family. The nasal discharge of the *healthy* child was full of diphtheria bacilli. There was no constitutional disturbance in this child. A case in which, on post-mortem examination twenty-one hours after death, membrane was found at the cardiac end of the stomach, and from this a culture of the bacillus diphtheriæ was obtained, is of bacteriological interest.

But little confirmation was obtained in these examinations of the statements that the severity of the disease is related to morphological varieties of the associated bacillus. Such statements can only be of value if made on the basis of direct examination of the false membrane. A few cases occurred amongst patients in hospital for diseases other than diphtheria, and were characterised by the typical appearance and purity of the cultures obtained and the extreme mildness of the disease. One case was remarkable—it has been reported by Dr. Ogle[1]—in that death was caused by a small

[1] Transactions of the Pathological Society of London, 1896.

stalked papilloma growing from the healed scar of a tracheotomy wound and causing obstruction of the larynx.

With the exception of the effect on tracheotomy cases, it is impossible to draw from the above statistics any strong evidence in favour of the serum treatment; nevertheless, noting the decided improvement in the statistics of the later years, the increased success of tracheotomy, the rapid clearing of the throat after injection, and the many details not capable of being reduced to statistics, there seems no doubt that the antitoxic serum has been of great value in the treatment of diphtheria. With a greater uniformity in the strength of the serum supplied, and a more accurate knowledge of the dosage, a better result may be hoped for.

NOTES ON

TWO CASES OF TOXIC AMBLYOPIA FROM IODOFORM.

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DURING the last two years I have treated most of my phthisical out-patients with considerable doses of iodoform, according to the system advocated by Dr. Foxwell in a paper published in the *Birmingham Medical Review* in August, 1894. As to the real value of the treatment I hope shortly to obtain some evidence by the analysis of my cases, and I may here merely say that I have hitherto firmly believed that comparatively good results are to be obtained by its means. The dose taken has varied with the circumstances of the case. Generally, unless any special contra-indication has been observed, the initial dose has been two grains three times a day, and this has been increased by two grains per dose every week, as inquiry showed the absence of toxic symptoms. From eight to ten grains has always been the maximum dose, and when this quantity has been reached constant inquiry for symptoms of poisoning has been made, and occasional intermissions in the treatment have been insisted upon. In only two cases have I observed any important symptoms of poisoning from the use of the drug, and in each of these the symptom has taken the form of a well-marked amblyopia. The following are brief notes of these cases, for part of which I am indebted to Dr. Wood White, who kindly examined the patients at the Birmingham and Midland Eye Hospital at my request.

CASE 1.—The patient, a man aged thirty-two years, came to my out-patient department on March 26th, 1896, complaining of cough, wasting, and shortness of breath of recent onset. On examination, signs of early phthisis were found at the apex of each lung. He was ordered a mixture containing cod-liver oil and iron and two-grain pills of iodoform to be taken three times a day. On April 16th he had been taking six grains three times a day for a week, and complained of a disagreeable "metallic" taste and smell; I therefore reduced the dose to four grains, and next week he reported that these symptoms had practically ceased. On May 7th the dose was increased to five grains, and from this time the quantity taken was gradually increased, without any further complaint on the part of the patient, until on June 18th ten grains were ordered to be taken three times a day. On July 9th an inquiry as to the condition of the sight elicited the fact that for the last week or two he had experienced some increasing difficulty in reading, especially at night; the iodoform was accordingly stopped and the patient was sent to the Birmingham and Midland Eye Hospital for examination. On July 20th Dr. Wood White reported that the vision of each eye was reduced to $\frac{6}{18}$. Beyond the omission of the iodoform no special treatment of the condition was adopted, but on Aug. 6th Dr. Wood White reported that the vision of each eye was $\frac{6}{5}$, and on Nov. 26th it was noted that the sight was normal.

CASE 2.—The patient, a man aged twenty-six years, first attended my out-patient department on Sept. 14th, 1895, complaining of an attack of hæmoptysis which had occurred a few days previously. He had been suffering of late from profuse night sweats; there were, however, no definite physical signs to be found in the lungs. During the next six weeks he had several further attacks of hæmoptysis, and by the end of October had developed distinct signs of phthisis at the left apex. On Sept. 28th he was ordered to take one grain of iodoform three times a day, together with a mixture containing cod-liver oil and iron. The quantity of iodoform was slowly increased, and on Nov. 2nd had reached eight grains per dose; and although I find that for some reason the dose was on Feb. 1st, 1896, reduced to six grains, yet on April 26th he was again taking eight grains, his weight having increased by eight pounds since the beginning of treatment. Shortly afterwards the dose was increased to ten grains. From this time he continued, with occasional intermissions, often of a few weeks' duration, to take varying quantities of iodoform, with apparently excellent results; but on Jan. 2nd, 1897, after having taken ten grains of iodoform for only three weeks continuously, he stated in answer to my inquiry that he had noticed of late some increasing difficulty in reading, again especially at night. The iodoform was at once stopped, and Dr. Wood White, who examined the patient at the Birmingham and Midland Eye Hospital, kindly sent me the following report of his condition: "Consensual light and accommodative reflexes present. There is no reflex on stimulation of sensory nerves in either eye. Vision: right eye, $\frac{5}{20}$, improved by + 50 cylinders; left eye, $\frac{5}{20}$; colour vision normal; right field of vision normal; left slightly contracted; discs pale, but not atrophied. The amblyopia in this case differs from that due to tobacco in that there is no central colour scotoma" After the above examination the patient failed to attend at either hospital for some time, but returned to my out-patient department early in April. He stated that his sight had rapidly recovered after leaving off the iodoform; and on testing I found that it was normal in each eye. His chest was free from signs of active mischief, and he looked and felt in good health.

The cases of toxic amblyopia from the administration of iodoform hitherto published are few in number. In a paper describing one such case, published in 1893 in the *Ophthalmic Review* by Mr. Priestley Smith, reference is made to two cases as the only ones then recorded. One of these was published by Hirschberg in 1882,[1] and resulted from the local application of iodoform; the other, recorded by Dr. E. Hutchinson,[2] was due to its internal administration. The third case, published by Mr. Priestley Smith, occurred in the out-patient practice of Dr Foxwell at the Queen's Hospital, Birmingham, and was also caused by the use of the drug internally in considerable doses. I have been unable to discover any later addition to the literature of the subject. It is difficult to say in what proportion of cases treated with iodoform amblyopia is likely to make its appearance. Dr. Foxwell seems to regard the symptom as a very uncommon one; my cases would rather suggest, however, that when large doses are taken for any length of time it is likely to be not very infrequently met with. On referring to my case-books I find that I have notes of 187 cases in which iodoform was administered, excluding all those in which the patient attended a single time only. Of these 187 patients 20 complained of the unpleasant taste and smell to which the drug is apt to give rise; and 12 of these were taking only six grains or less at the time. Of the two patients who suffered from amblyopia only one had complained of the taste of the pills. It is to be noted, however, that in only a certain proportion of the cases did the dose reach as much as eight or ten grains; and that, moreover, a considerable number of the patients attended for but a short time only. The following table will present a summary of these points:—

Total number of patients taking over 5 grains 133						
" " 8 or 10 grains 84						
Attended over 6 months ...	4	.....	Maximum dose	10	grains	4
" from 3 to 6 months	12	.....	"	"	"	6
" from 6 weeks to 3 months	69	.....	"	"	"	32
" under 6 weeks ...	102	.....	"	"	"	5

Again, the time during which the large dose has been taken has varied considerably, 27 patients taking this dose for periods varying from four weeks to five months, with occasional intermissions, as already described. None of these patients developed any important signs of poisoning during the continuance of the large doses, but 5 complained of the smell or taste at some period of the treatment. The 2 patients who developed amblyopia had each

[1] Centralblatt für Praktische Augenheilkunde, p. 92.
[2] New York Medical Journal, Jan. 2nd, 1886.

been taking ten-grain doses for three weeks only at the time when the symptom was reported.

Since the cases above referred to, together with the two recorded in this paper, appear to establish the fact that iodoform is liable to cause amblyopia, it becomes a question whether its use internally is any longer justifiable. This question may, I think, be answered in the affirmative, always supposing that the treatment is of real value. In my own cases and in that recorded by Hirschberg, recovery was complete and rapid after the discontinuance of the iodoform; in the other two recovery was progressing satisfactorily when the last notes were taken. It therefore seems probable that if the amblyopia be early recognised and the drug promptly omitted no permanent mischief need be feared. I have now adopted the plan of recording the vision of all those patients whom I am about to treat with iodoform before beginning its administration; I then make periodical inquiries as to the sight, and am able to discover when any diminution is acknowledged whether alteration has really taken place. This measure is, I find, absolutely necessary owing to the certainty in hospital out-patient practice that any symptom frequently inquired for will sooner or later be acknowledged by the patient. I have only to add that in my cases the onset of the amblyopia was not accompanied by any other symptom.

Birmingham.

FOUR SUCCESSFUL CASES OF TRANSFUSION OF SALINE FLUID.

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IN THE LANCET of Aug. 17th, 1895, I recorded six successful cases of transfusion of normal saline solution, and since that time several cases have occurred in the practice of the Dundee Royal Infirmary in which transfusion has been employed, in some with wonderful effect and in others with well-marked temporary improvement. The following is a brief note of the successful cases.

CASE 1.—A woman, aged thirty-nine years, pushed her arm through a window, severely lacerating it. She bled profusely and on admission to the infirmary an hour afterwards was in a very serious condition. She was quite unconscious and markedly anæmic; the respiration was shallow, with occasional sighing; no pulse could be detected. She had a transverse wound over the front of the left elbow-joint severing the radial artery at its origin. The median cephalic vein was also divided, and into this were transfused five pints of normal saline solution at a temperature of 105° F. The effect was very wonderful. In a few minutes she opened her eyes, consciousness slowly returned, and the pulse became quite good and regular. She made a good recovery and went home in ten days.

CASE 2.—A boy, aged twelve years, was admitted to the infirmary on March 25th, 1896, under the care of Dr. MacEwan, with extensive disease of the right knee-joint. He was in a fairly healthy condition. Dr. MacEwan excised the right knee-joint, and numerous tuberculous deposits were found in the femur and tibia, even above the epiphyseal lines. The medullary cavity of the femur was opened and drained. The patient did not suffer from shock or loss of blood, and he bore the operation well. He remained fairly well for thirty-six hours, when he suddenly developed a rigor and became delirious; his temperature was 103° F. and his pulse 144. The wound was dressed but found to be sweet. Eight hours afterwards he was quite unconscious and apparently dying. The left internal saphenous vein was opened, and four pints of saline fluid were introduced with a very good effect, as, with the exception of a severe rigor half an hour after the injection, he made a good recovery and is now almost well.

CASE 3.—A man, aged thirty-two years, had his arm caught in machinery, rupturing the brachial artery and smashing the arm. He lost a very large amount of blood and when brought to the hospital was in a very collapsed state. Amputation at the shoulder-joint was performed. He suffered from collapse, and during the night his pulse could not be felt. He was transfused with five pints of saline fluid. An hour afterwards he had a rigor, with a temperature of 103° F., but with this exception he made a rapid recovery.

CASE 4.—A woman, aged twenty-three years, was admitted on June 6th, 1896, under the care of Dr. Whyte, suffering from purpura and anæmia. She had several severe attacks of violent epistaxis which were difficult to control. The patient's condition became very serious; the pulse was quite imperceptible, and she was apparently dying. She was transfused with five pints of saline solution, with the effect noticed in Cases 2 and 3—viz., a rigor and temperature of 104° F. one hour later. She revived almost at once and made an excellent recovery.

Remarks.—There can be no doubt that we have in transfusion one of the most simple yet efficacious remedies in all cases of shock from hæmorrhage. How far it is of service in cases of nervous shock and collapse is yet undecided, but in some cases it is of great value. Larger quantities should be given than those generally recommended, four or five pints being a usual quantity. I have given as much as twenty-four pints at four injections within twenty-four hours without any apparent discomfort. I have noticed in several cases the occurrence of a rigor, commencing from half an hour to an hour after the operation and lasting about five minutes, with a high temperature. This seems to have no serious effect, the temperature quickly subsides, and recovery is not retarded by it. In Case 2 there is every reason to suppose that an acute attack of septic osteo-myelitis was cut short by the transfusion, my explanation being that an increased volume in the vessels would offer a greater resistance to attack and at the same time dilute the blood stream and so disperse the micro-organisms. If this be so, there is reason to suppose that transfusion may be employed in acute specific diseases due to micro-organisms, as in any case it could have no other than a highly beneficial effect if performed with ordinary care and with a sterilised solution. The apparatus I use consists of an ordinary glass funnel and tubing, with a glass nozzle for insertion into the vein.

Dundee.

NOTES ON THE ANATOMY, DEVELOPMENT, PATHOLOGY, AND SURGERY OF THE FRONTAL SINUSES.

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Anatomy.—The frontal sinuses are generally two irregular cavities between the inner and outer tables of the frontal bone, near the root of the nose. In the fresh state these cavities are lined with a thin, pale, closely-adherent mucous membrane, and separated from each other by a well-marked septum. They usually communicate separately with the corresponding nasal cavity by an opening, variable in size, leading into the anterior extremity of the middle meatus of the nose. The examination of a large number of frontal sinuses in the moist and dry state discloses many points of interest. In the first place there is no space between the tables of the frontal bone before the seventh year. There may be a complete absence of these cavities even in extreme old age. I have bones in my possession showing a frontal sinus only on one side. The extent of the frontal sinuses varies widely, and unfortunately the external appearances of the skull give no indication of these variations. The frontal sinuses are seldom symmetrical, except in a general sense. Of the extent of these spaces there are specimens in the Museum of the Royal College of Surgeons of England, showing a separation of the inner and outer tables of the frontal bone almost to the coronal suture. The orbital plate of the frontal bone is frequently the site of a large cavity, communicating with, and forming part of, the frontal sinuses. The frontal sinus of one side may not communicate with the nose or its fellow of the opposite side, but may communicate with the anterior ethmoidal cells of the same side. The septum dividing the two sinuses is usually partly bony and partly fibrous, but is always well marked. It may be entirely bony or entirely fibrous. Its central position is constant. I have never found a frontal sinus not in communication, directly or indirectly, with the nose. The evolution of the frontal sinuses is not complete until the twenty-first year.

Development.—In the records of the Transactions of the Provincial Medical and Surgical Association for 1883, vol. i., appears a very able and highly suggestive article on "The Development of the Frontal Sinuses." by Dr. Milligan, of Edinburgh; also in his notes on "Majendie's Physiology" are some pertinent remarks in the same direction. Milligan shows that the functions of the two tables of the skull are quite different—that the inner table, being moulded closely to the fissures and convolutions of the brain, is mainly supporting and protective to that organ alone; next, that the brain arriving at its full state of maturity at seven years of age, the inner table ceases to grow or to expand after that date. Not so the outer table, which is an irregular envelope, at some places as thin as a wafer, at others thicker than all the rest of the cranium. If viewed from without we find that every particle of its surface is adapted to some purpose it has to answer in combination with the soft parts it is in contact with. Many prominences are levers for the muscles; others are scabrous surfaces for their insertions; others are condyles for joints; others organs of hearing; others organs of fixation; others of protection. And all this in direct reference to the organs of contact, but without the least relation that can be discovered to the encephalon. Hence we are forced to conclude that its projections solely originate under the influence and for the completion of functions that are external to the cranium. The evolution of the frontal sinuses does not take place till the seventh year, nor is it complete till the twenty-first year. At the seventh year the bones of the face are yet small and childish and the jaws are occupied by the first set of teeth. At this time the Wenzels inform us from many observations that the brain has arrived at its full magnitude. Up to this time the internal carotid artery was many times larger than the external, but immediately after full development of the brain has taken place a sensible diminution in its calibre occurs and a rapid and large increase is apparent in the external carotid and its branches. The bones of the face, the teeth, eyebrows, and outer table of the skull now grow rapidly, and, the internal table being at a standstill, large spaces occur between the tables of the skull; hence the frontal sinuses. In dealing with the diseases and surgery of the frontal sinuses one is struck with the fact that the patients do not apply for relief to the institutions most capable of affording relief. Seeing, indeed, that these are essentially cases for the general surgeon who at the same time has a special knowledge of the diseases of the nose, and primarily in no sense ophthalmic troubles, it is unfortunate that in most cases these patients apply for relief to the various ophthalmic institutions. The records of the special hospitals for diseases of the nose and throat are almost blanks; but, on the other hand, if anyone examines the reports from the various ophthalmic hospitals he will find many cases recorded of affections of these spaces. This is accounted for by the fact that accumulations of fluid, be it pus, serum, or mucus, or what not, in ninety-nine cases out of a hundred, bulge or perforate the roof of the orbit and protrude at its upper and inner angle under the upper eyelid, usually causing diplopia as a prominent, and often to the patient only, symptom. The records of these cases are not a few, and the names of ophthalmic surgeons are invariably associated with them. Hulke, Lawson, Soelberg Wells, Bell Taylor, and many others have each reported one or more cases.

The lining membrane of the frontal sinuses is but an extension of the lining membrane of the nasal cavity through the infundibulum. It differs widely in character from the nasal lining membrane. It is extremely thin, and in the healthy state pale in colour, and intimately adherent to the subjacent periosteum. From these differences in anatomical character it follows that the lining membrane of the frontal sinuses would probably not be subject to the same *rôle* or list of diseases that characterise the more vascular and complicated lining membrane of the nose proper. By far and away the most common affection of these spaces is catarrh, in one form or another, leading commonly to distension and abscess by the retention and accumulation of the products of inflammation. The pressure of the retained fluids bulges in some cases the bony casement at its weakest point, the roof of the orbit causing displacements and protrusion of the eye. Cases are not unknown where the contents have pressed backwards and necrosed the bone, and so entering the arachnoid cavity have set up a fatal meningitis or abscess of the brain. Again, the pus—although rarely—may bulge and perforate the bone in a forward direction. Cases, again, occur where the accumulation is intermittent, the pressure due to retention forcing the normal passage into the nose. These latter cases are not marked by a protrusion into the orbit, and being free from any gross external signs to assist the diagnosis are, as a rule, unrecognised. To this class of cases the term "latent empyema" of the frontal sinus is, I think, properly applied. The diagnosis and treatment of these two classes of cases is radically different. In the former we have to make a diagnosis and differentiate from distended lacrymal sac, dermoid cysts, cellulitis of orbit, exostoses, and new growths. In latent empyema of the frontal sinus the diagnosis to a large extent depends upon subjective symptoms alone. In the one class of cases the first and only symptom may be a displacement of the eyeball associated with diplopia, but unaccompanied with pain or uneasiness at the root of the nose. Latent empyema of the frontal sinus is not necessarily associated with any other affection in the throat or nose. The onset is usually undefined, and patients have merely perceived that from a certain date without well-marked cause they began to suffer from pain and uneasiness in the situation of the frontal sinuses (Professor Ogston). After a while headache at the root of the nose, varying in intensity but always present, is a main feature of these cases. A discharge of pus, not abundant but variable in quantity if looked for, may generally be made out. Pus may also be found at the anterior part of the roof of the cavity, but is small in amount and rarely visible. Pain or tenderness on pressure may or may not be present, but percussion with the fingers or a pleximeter generally elicits some uneasiness. The pain varies in some degrees, it is constantly present, but is seldom acute or unbearable. Bending forwards, stooping, or reading increases the trouble, and as a rule it is increased when in the recumbent position and after sleep. Dull, damp, and rainy weather increase the discomfort, but high altitudes and bright and dry atmospheres improve matters considerably. Many of these cases escape diagnosis, and are treated with bromides and iodide of potassium, shower baths, and the usual list of remedies for headaches without material benefit. I have the notes of several cases of latent empyema of one or both frontal sinuses where with symptoms such as related above the diagnosis has been made, and on the sinuses being trephined from the front the lining membrane has been found so granular as almost to constitute a polypoid state. In other cases many actual polypi have been found. These cases have without exception in my own hands done well, leaving on the forehead scarcely an indication of the site of the operation. In latent empyema of the frontal sinus to reach and effectually treat the disease by way of the infundibulum is, in my experience, practically out of the question. Resort must be had, then, to opening the sinuses in front at the root of the nose in the mid-line, or at the inner and upper angle of the orbit. A strong and fatal objection to this latter procedure being that the empyema may be one-sided, and it is impossible as yet to make sure on which side the disease is located. The procedure requisite to open the frontal sinus from the front is the following: The patient being anæsthetised, preferably with chloroform, and the interval between the eyebrows being divested of any hairs and made scrupulously clean, a note is to be made of the exact spot in the mid-line on a level with the upper margin of the orbits. This, for the purposes of the operation, may be termed the "pin spot," as it is the spot where the pin of the trephine is subsequently placed. An incision should be made exactly in the mid-line commencing at the root of the nose below the glabella and carried upwards for about two inches. In this incision everything is divided to the bone. There is no hæmorrhage as a rule. Next the pericranial covering is raised by an elevator and retracted to each side with blunt hooks or retractors. Bone to the extent of a five-shilling piece will now have been exposed. A trephine with a crown the size of a sixpenny-piece or less should now be so placed on the glabella that the pin of the trephine enters the bone at the "pin spot." The trephine is worked in the usual way with caution, examining with a fine probe the depth of the incision after every few twists. As it is important to remove the button of bone without lacerating or opening the lining of the sinus great care must be observed during the last few twists of the trephine. The trephine does its work first below and there is always some difficulty in removing the button, the bony septum or arch dividing the sinuses retaining it above. By careful manipulation with an

elevator the button of bone is detached, leaving the mucous lining of the sinus intact. This step is important for the following reasons. One or both sinuses may be healthy. The nature and character of the contents is obscured by admixture of blood. There may be no frontal sinus, and the cerebral cavity may be below what is supposed to be the lining membrane of the sinus. One or both sinuses, according to circumstances, is, or are, next to be opened with forceps and scissors and examined. Any secretion is to be removed. Any disease of the mucous membrane is to be treated by curetting or chloride of zinc, or both. Any polypi are to be removed, and the stumps treated with caustic, if requisite. Above all things, an opening must be established with the nasal cavity, and a drainage-tube inserted and maintained in position. Daily ablutions with antiseptic fluids will keep up a healthy action and assist a cure. The wound is to be accurately joined, the pericranium and pericranial aponeurosis, as well as the skin, being separately and carefully adjusted. The tube may protrude from the centre of the wound for the first few days for the purposes of irrigation, but subsequently may be shortened or dispensed with entirely. The result of this operation is usually immediately beneficial. The patients lose their troublesome symptoms and are permanently relieved. The wound healing by first intention there is no scar or disfigurement, and the line of the incision is scarcely perceptible. The method adopted by ophthalmic surgeons of treating the other and more common class of cases as illustrated by a protrusion and displacement of the eyeball is rarely satisfactory. Lawson, Hulke, and others have laid down the rules and steps of the operation for opening the frontal sinuses at the upper and inner angle of the orbit at the most prominent point of the swelling with great exactitude. I have adopted this procedure seldom with more than temporary benefit, and never with speedy relief or cure. In this procedure the protrusion in the orbit is attacked and opened at its most prominent point. The incision is made through the orbicularis muscle, suspensory ligament of the eyelid, and often close to the pulley of the superior oblique muscle and in proximity to the lacrymal sac. The opening speedily closes and granulations spring up, impeding the discharges and ultimately hampering the movements of the lids and leaving a nasty scar and much disfigurement of the parts. More than this, during the operation no clear or exact view is obtained of the interior of the sinus or lining membrane. In this operation it is most difficult to find the infundibulum or enlarge the same, if required, from the orbital opening. A drainage-tube in the upper eyelid is most annoying to the patient and most unsightly. Experience shows that these cases treated thus go on discharging for years and are not cured. I have long discarded opening the swelling in the orbit. I now always trephine in the front, a little to one side of the mid-line, and treat the case after the method of a latent empyema. Six weeks will usually suffice to cure these cases if operated on from the front. More rare affections of the frontral sinuses next to accumulation of fluids or pus are exostoses, polypi, and new growths. Exostoses are very rare and are usually of the hard description. There is one specimen in the Hunterian Museum, a large one, filling both sinuses and protruding into the nose and orbit. The museum at Cambridge contains another specimen, and a third is to be found at the museum of St. Bartholomew's Hospital. Mackenzie had two small specimens found, I believe, unexpectedly post mortem. Polypus of the frontal sinus of any size or in the form of pedunculated growths is rare, but when occurring is usually associated with the same disease in the nose. Mr. Hulke[1] reported several cases of polypus of the frontal sinus, only one case of which was unassociated with a similar state of things in the nose. These cases generally led to accumulation in the sinuses and were not primarily diagnosed as polypi. New growths are extremely rare, but sarcoma has been reported as presumably originating in these spaces. Of insects in the frontal sinus cases have been reported by Mackenzie and others. One interesting case of foreign body in the frontal sinus was under my own care—the only case of the kind, so far as I am aware, on record. During the exhibition of snuff a quantity was drawn into an unusually patent frontal sinus, and set up the most intense inflammation with great headache, high temperature, and delirium.

Harley-street, W.

[1] THE LANCET, March 14th, 1891.

OBSERVATIONS UPON RE-VACCINATION.

BY ROBERT J. CARTER, M.D. LOND., D.P.H. ENG.

DURING a recent small-pox epidemic I collected notes of 319 cases of re-vaccination. Calf lymph prepared with glycerine was used in every case, and the operation was performed indiscriminately on all persons who presented themselves, the ages varying from four to sixty years. Four insertions were made in the usual situation on the arm in every case, and only those arms which presented a vesicular stage on the eighth day after the operation were accounted successful. At the same time short notes as to the clinical condition of the patients were taken. The results obtained show very clearly how rapidly in early life the effects of primary vaccination wear out, the insusceptibility to re-vaccination being of a much more evanescent character than is generally believed. For the purpose of showing this clearly I have arranged the successful cases in two Tables. Table A comprises 143 children up to, and including fourteen years of age, all vaccinated in infancy; Table B comprises 171 adults over twenty-four years of age, vaccinated later in life than the fourteenth year.

TABLE A.

Number of years since last vaccination.

4	5	6	7	8	9	10	11
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
3 —	6 —	7 —	6 —	15 1	14 —	19 —	20 —

12	13	14
S. F.	S. F.	S. F.
15 —	16 —	25 —

TABLE B.

Number of years since last vaccination.

1	2	3	4	5	6	7
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
— 12	— 13	— 6	— 8	— 2	— 6	— 1

8	9	10	11	12	13	14
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
1 4	1 2	2 2	1 —	1 2	2 8	— 3

15	16	17	18	19	20	Over 20
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
2 1	— 2	— —	1 —	— 2	— —	82 4

Comparing these results somewhat in detail, it will be noted that of those under fourteen years of age vaccinated in infancy the earliest successful case is four years after the primary vaccination, whilst in Table B the earliest successful vaccination is after a lapse of eight years. In Table A the only three cases vaccinated at the fourth year were all successful; in Table B the earliest successful case occurs in the eighth year after previous vaccination. The proportion of failures to successes gradually diminishes in Table B. In Table A the solitary unsuccessful case is probably an accident. Practically at the tenth year re-vaccination of children vaccinated in infancy always results in a more or less typical vaccinia, whereas in adults it is not until about twenty years after a previous vaccination—and not always then—we can ensure any successful result. I feel that the paucity of numbers and possibilities of failures due to the vaccinator tend to depreciate these results, but when allowance has been made for such deficiencies I consider they still will bear the interpretation I have put upon them—viz., the greater rapidity with which the effects of vaccinia upon the organism wear out

in early life compared to more mature age. The explanation of this, I venture to suggest, is that up to puberty the tissues are in a much more active condition; tissue change is more rapid, and impressions on the organism more easily effaced than in adult life.

The Local Government Board do not allow public vaccinators to be paid for re-vaccinations upon children under ten years of age; but in the face of these results I would suggest that in small-pox epidemics every child in whose case four years have elapsed since the primary vaccination should be re-vaccinated. The condition of the arm on the eighth day after re-vaccination varies exceedingly. The areola appears much earlier than in primary vaccination. In 197 cases it was present on the second day. On the eighth day it varies from a circumferential blush around the vesicles to a uniform redness extending from the shoulder to the elbow, of a bright crimson colour, disappearing on pressure. I regard this condition as different to that in which we see œdema and redness extending down to the finger-tips. Some enlargement of the axillary glands can always be discovered if looked for. In 106 cases these glands were large, hard and tender, and in some instances exquisitely painful. In three cases the glands above the clavicle were also affected. Lymphangitis was present in nine cases, the lymphatic vessels being felt as hard, swollen, tender cords along the course of the axillary vessels. Induration and œdema of the arm were present in ninety-eight cases, and were of a curiously persistent character. They did not appear to be associated entirely with the glandular affection, but were apparently dependent upon the intensity of the local inflammation at the site of the vaccination.

Constitutional symptoms, except the temperature, are difficult to estimate, apart from the idiosyncrasy of the patient. Several complained of aching pain in the lumbar region, headache and nausea which, while not uncommon symptoms of a febrile condition, are the cardinal symptoms of the early stage of variola. Lassitude, giddiness, and loss of appetite were common among the male adults, whilst fainting and neurotic manifestations were noticed among the females. Post-vaccinal rashes were only seen in four instances. It was impossible to take the temperature of all the cases, but in those in which fever was noted the pyrexia appeared directly proportional to the amount of inflammatory action in the arm. It is commonly accepted that the amount of inflammatory action depends to some extent on the active use of the arm during the week following vaccination. In all my cases the occupation was noted, and it was found that the most severe cases occurred in women who had worn slings directly the vaccination showed signs of being successful. Its severity appears to me to depend entirely upon the general constitutional condition and the environment of the individual.

The treatment of severe cases was simple and apparently successful—free saline purgation, rest for the arm, the application of a lead and opium lotion, early and frequent removal of the scabs, and a boracic ointment dressing for the subjacent ulcers.

Acacia-road, N.W.

THE CONTINUOUS ADMINISTRATION OF NITROUS OXIDE GAS AND OXYGEN DURING MINOR SURGICAL OPERATIONS.

BY H. BELLAMY GARDNER, M.R.C.S. ENG., L.R.C.P. LOND.,

ASSISTANT ANÆSTHETIST TO CHARING-CROSS HOSPITAL.

EIGHT years have elapsed since the possibility and distinct advantage of giving small percentages of oxygen with nitrous oxide gas to produce anæsthesia at ordinary atmospheric pressures were first pointed out in THE LANCET by Dr. Frederic Hewitt.[1] Though this method has now obtained a very wide and substantial footing in the dental profession, it can hardly be said that its remarkable value in prolonging the anæsthesia and rendering the patient flaccid and free from spasm for several minutes at a time has procured sufficient recognition among surgeons, who would have been expected to readily appreciate a mixture which leaves neither nausea nor mental disturbance after its inhalation, and, more important still, which subjects a patient to the least possible risk incurred by the exhibition of any known anæsthetic agent. The presence and concurrent inhalation of from 10 to 15 per cent. of oxygen with nitrous oxide gas are sufficient to maintain the due proportion of oxy-hæmoglobin in the arterial blood, and thereby to render an inhalation which formerly was cut short by the supervention of asphyxial symptoms capable of being sustained while many minor surgical operations are being effected. While the condition produced by the presence of oxygen is clinically free from asphyxial symptoms in those surgical procedures which are undertaken after removal of the face-piece, I have also found that a very tranquil anæsthesia may be obtained in those others which permit of its continuous application, even with quantities of oxygen rather larger than those usually administered in the first class of cases. To illustrate the kind of painful operation for which I think this method has proved to be appropriate the following cases are taken from my notebooks.

CASE 1.—A man, aged forty-seven years, with good chest expansion, stoutly built, and of rather florid colour, required the removal of four sebaceous cysts from the scalp. Before the administration he was seated in a comfortable armchair. The surgeon washed and prepared the skin around the cysts, and the face-piece was then applied. Commencing with a small percentage of oxygen (to allow for that already present in the lungs), the amount was gradually increased whilst the lid-reflex disappeared. Breathing continued deep and free as during sleep; the colour was good; no inconvenient movement occurred; and the operation—during which the cysts were excised and the incisions sewn up—proceeded for five and a half minutes. At its completion the patient awoke—one minute after removal of the face-piece—without any untoward sensations whatever.

CASE 2.—A girl, aged seventeen years, of average height and build but rather anæmic, suffering from a tuberculous abscess in the left side of the neck, was seated in an upright chair with a head-rest while the swelling was incised, thoroughly scraped, cleaned out, and then sutured with four separate stitches. During this operation, which lasted four and a half minutes, she was kept absolutely tranquil with a good, regular pulse under the influence of nitrous oxide gas and oxygen. The recovery was rapid and presented no after-effects of any kind.

CASE 3.—A man, aged thirty-five years, of average height but rather thin and pale, had two suppurating cysts on the scalp, one of which was very painful. He was seated in an easy-chair when the face-piece was applied. Again the percentages of oxygen with the gas were gradually increased until he was softly snoring as if under chloroform. The pupil remained of moderate size and the pulse and colour were very good whilst the incision, scraping, and dressing of the inflamed areas were completed. This operation also lasted four and a half minutes. He afterwards said it was very pleasant to inhale, that he felt quite well, and had not the slightest sensation or consciousness during the administration.

In the course of my work at Charing-cross Hospital I have lately administered nitrous oxide gas and oxygen during the excision of a varicocele lasting fourteen minutes. The patient, who was a male, aged twenty-two years, of a rather florid type, was inclined now and then to become a trifle dusky in colour, but this was owing to there not being quite sufficient oxygen at command; his absolute flaccidity and quietude during the time were, however, quite satisfactory to the operator. His breathing remained regular and the circulation was well maintained throughout. Recovery was complete in two minutes and he was not sick subsequently.

It has been my custom for the past two years to administer this anæsthetic in the aural department for the removal of post-nasal adenoid growths, and the advantages which may be claimed for its use are: (1) that it is not attended with danger to life; (2) that preparation for the operation is not absolutely necessary, though undoubtedly the *best* results are obtained after abstinence from food for three or four hours; (3) that hæmorrhage is unaffected by it; (4) that the jactitation and cyanosis produced by pure nitrous oxide gas are absent; (5) that any posture desired by the operator may be safely assumed; (6) that when the face-piece is removed the available anæsthesia is about fifteen seconds longer than that

[1] THE LANCET, April 27th, 1889, p. 832.

yielded by gas alone; and (7) that unpleasant after-effects of any kind are of very rare occurrence. After an experience of several hundreds of cases I ought to state that during this operation some of the patients will move a little and in some there will be a little phonation; but, on questioning them it will be found that they felt nothing of the operation and would quite willingly take the anæsthetic again. This result is not often attainable with gas alone, for children yield a very short anæsthesia under its influence and may be very blue and rigid, whilst if oxygen be present there will be muscular relaxation with good normal colour.

For the removal of enlarged tonsils the mixture is a distinct improvement upon gas alone, because there is less venous turgescence and therefore less swelling of the tonsils and tongue, with a corresponding immunity from obstructed breathing during unconsciousness. Incision of the tympanum, removal of aural and nasal polypi, and other procedures of a like nature have also been successfully accomplished under its anæsthetic influence.

I believe that for the painless movement of stiff joints and the stretching of adhesions in their vicinity it forms by far the most suitable agent at our disposal, because muscular flaccidity is quickly produced and the patient will not object to a second inhalation of these tasteless gases if the operation has after an interval to be repeated.

In sensitive subjects the passage of a catheter is often a matter of apprehension and pain; those who would otherwise resist the surgeon's manipulations can be kept quietly unconscious by inhaling the mixture until this procedure is accomplished and fear of suffering is at an end. I hold that it is an anæsthetist's aim and ideal to render his patient insensitive to pain with as little damage to the physiological processes of his system as possible, and for these or similar operations I find this method a great improvement upon gas alone, while the danger of chloroform and the sickness resulting from the use of ether are entirely avoided by its employment.

Welbeck-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CLINICAL NOTE ON THE PROPERTIES OF ACETANILID.

BY EDWARD F. GRÜN, M.R.C.S. ENG., L.R.C.P. LOND.

IN THE LANCET of June 27th, 1891, you were kind enough to insert an article written by me on the treatment of what I designated "Specific Bronchitis." In that article I adverted to the germicidal properties of what at the time was a comparatively unknown drug, acetanilid, giving bacteriological proof of the very high comparative value in arresting growth of all forms of micro-organism in nutrient media, and urging medical men to give the drug a trial. Since that date—now nearly six years—I have taken every opportunity afforded me by private practice to test the value of this compound as a dressing for wounds, and the result of my experience is that for convenience, reliability, and general utility there is no antiseptic drug to equal it. This question is so easy of proof (which is not always the case with drugs recommended for internal use) that I feel the preparation has only to be thoroughly tested under fair conditions to become universally accepted as the dressing for wounds *par excellence*. During the past six years among a number of cases which have come under my care the following will serve to illustrate the valuable healing powers of this compound of aniline. There is no necessity to quote the names of the cases, but many were seen by members of the profession beside myself, and I can, if necessary, give the full details. It is sufficient to say that every one healed without the formation of pus and the majority by first intention, although the operations described were often performed under conditions which rendered antiseptic precautions absolutely impossible.

CASE 1.—July 14th, 1895: A compound fracture of the metatarsal bone, caused by the wheel of a waggon loaded with two tons of coal passing over the foot of a man, was complicated with severe laceration of the skin. The patient was able to resume work in about twelve weeks from the date of the accident.

CASE 2.—Aug. 18th, 1895: After amputation of the forearm of a woman union by first intention resulted, and the dressings were removed at the end of a fortnight.

CASE 3.—Sept. 30th, 1894: A man was operated upon for strangulated hernia. The operation was performed in great haste in a cowshed, the sac being opened and Gimbernat's ligament divided. The patient was removed to the infirmary at Alton on the same day, and was discharged cured at the end of seven days. The wound healed by first intention.

CASE 4.—1893: This was a case of removal of the breast for suppurating cancer. The breast had been injected with methyl-violet, according to Professor Moestig's method, which caused suppuration of the cancer. The breast was subsequently removed. The wounds were entirely healed at the end of ten days.

CASE 5.—In this case the operation of amputation of the leg was performed in the tap-room of a public-house. The patient was removed to the hospital, and he subsequently made a very good recovery.

The foregoing are the most serious cases in which I have made use of acetanilid as a dressing for wounds. In addition to these I have made use of the remedy in innumerable cases of minor surgery, such as removing fingers or toes, burns, lacerations, &c. I was induced to try the drug in 1891 on purely theoretical grounds, and am happy to say that in actual practice the beneficial results far exceeded my anticipations. As many of your readers may not be acquainted with the physical properties of this compound I may say that it is a white, crystalline powder, quite tasteless, inodorous, and almost innocuous when taken internally up to quantities of from five or ten grains. It may be mentioned that occasionally it causes a bluish tinging of the skin and some blueness of the lips and finger-nails. The urine occasionally is tinged with blue. The bluish discolouration I believe to be due to some impurity which was formerly present in the commercially prepared compound, for latterly I have failed to notice any of this colouring in patients under the treatment. The drug is applied as a dry powder, when it appears to cause a dry, healthy scab on lesions of continuity, and a gluing together of the edges of incised wounds. Recently I have been using this remedy for treatment of ulcerated legs in old people, and find that in the majority of the cases a clean, dry surface is formed in a few days and healing rapidly promoted without the necessity of bandaging or strapping.

Southwick, near Brighton.

"FUNCTIONAL ACTIVITY OF MAMMARY GLAND IN AN INFANT."

BY F. S. D. HOGG, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE HOUSE SURGEON, WEST LONDON HOSPITAL.

MR. HAWTHORNE'S communication on the above subject in THE LANCET of May 29th is of interest as relating to a somewhat unusual occurrence in the infant and one which is not referred to by many writers on infantile complaints. I came across such a case a few days ago. I was asked to see a female child, one week old, on account of her having vomited a small quantity of blood and, as the nurse believed, having passed some blood by the vagina. On examining the child I could find nothing amiss with her excepting that the breasts were considerably enlarged, not painful, and a milky fluid could be expressed on slight pressure. I directed that this milky fluid should be expressed occasionally, and have heard nothing further of any trouble with the child. The mother of this child and the nurse who was with her at all her confinements stated that both her former children (a boy and a girl) secreted a milky fluid in the same manner, and the mother further states that as infants she and her brothers and sisters were similarly affected. I have only seen one other case, in a child, a female, now eight years old, whose breasts do not now at all differ from those of other children of her age; but on the hearsay evidence of several mothers and nurses I think that this condition must be more frequent

than the absence of all mention of the subject in most of our text-books might lead one to suppose.

Tillingham.

A MARKED HISTORY OF SYPHILIS.

BY E. CECIL WILLIAMS, M.B. CANTAB.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS, HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.

THE following history may prove of interest to the readers of THE LANCET on account of its completeness and the remarkable fertility of the woman.

The patient, aged forty-two years, married twenty years, had been pregnant twenty-one times. She was fragile and debilitated, had had no serious illness, but shortly after marriage she had a primary sore, followed by sore-throat and a well-marked rash over the body, for which she was under treatment for ten months. She says that her husband was suffering from syphilis at the time of her marriage. The eldest child was born ten months after marriage, and died at seven weeks. The child had well-marked signs of congenital syphilis. The second pregnancy resulted in a miscarriage at six months; the third in the birth of an eight-months' child, dead; the fourth in the birth of an eight-months' child, dead; the fifth in the birth of a child at full time, who lived two years and seven months, and was rickety; the sixth in a child born dead at six months; the seventh in the birth of a child who is still living and fairly healthy (now aged fifteen years, but has rather a characteristic expression); the eighth in the birth of twins at full time, both dead; the ninth in a child born dead at eight months; the tenth in the birth of a child at full time, who died at the age of nine months (had snuffles and rash on buttocks); the eleventh in the birth of a child at full time, who is alive and fairly healthy; the twelfth in a miscarriage at four months; the thirteenth in a miscarriage at three months; the fourteenth in the birth of a child at full time, who is living; the fifteenth in the birth of a child at full time, who died aged seven weeks; the sixteenth in a miscarriage at three months; the seventeenth in a birth at eight months, the child dying at the age of seven weeks; the eighteenth in a miscarriage at four months; the nineteenth in the birth of a child at full time, who is three years of age and healthy; the twentieth in the birth of a full-time child, who is two years of age, but rickety; and the twenty-first in the birth of a child at full time (now aged six months), who is markedly syphilised and has snuffles, excoriations on the buttocks, and is wasting. The mother presents no symptoms of tertiary syphilis. She says that since the secondary symptoms, twenty-one years ago, she has had no symptom of the disease, but she has suffered from leucorrhœa and bearing-down pains. It certainly appears as though she had been rendered immune to the disease. I have seen two of the children; they have the facial expression of congenital syphilis, but appear to be fairly well. From what I could gather from the mother those that died were markedly syphilitic.

Bristol.

LONGEVITY.—A correspondent has forwarded to us a paragraph which has recently come under his notice, giving the following instances of longevity. It was taken from the *Saltburn-by-the-Sea and Guisboro' Herald* of Sept. 2nd, 1887: "There were interred in the Skelton Churchyard, on Sunday last, the remains of an old resident, Mary Husband, aged 101. In the same churchyard is to be found a tombstone recording the death of James Moon, aged 106; his wife, 84; and his sister, 101."

THE annual meeting of the Association of Registered Medical Women was held in the library of the Association (New Hospital for Women) on June 1st, at 8 P.M. There were present Mrs. Garrett Anderson, M.D. Paris, retiring President, in the chair, and twenty-four members. The proceedings were of a business character; the managing committee and sub-committees for the ensuing year were elected and the constitution of the association was reconsidered. Miss Cock, M.D. Brux., was elected president for the year in succession to Mrs. Garrett Anderson, and Mrs. Stanley Boyd, M.D. Brux., was elected vice-president.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF STRANGULATED FEMORAL HERNIA; GANGRENE OF BOWEL; PRIMARY RESECTION; RECOVERY.

(Under the care of Mr. H. BETHAM ROBINSON.)

THE best method of treatment to be employed in cases of gangrene of the bowel resulting from strangulated hernia is by no means settled. Two plans are open to the surgeon; he may at once resect the gangrenous gut and suture the divided intestine, or he may content himself with making an artificial anus and postpone to a future occasion the operation for restoring the continuity of the bowel. Primary resection of the intestine is by no means new; it was done in 1794 by Nayler, of Gloucester, and in two cases Sir Astley Cooper performed it, advising it in the following words:[1] "When the whole cylinder of the intestine is mortified it is necessary to proceed very differently. Then the mortified part of the intestine should be cut away and the ends are to be brought in contact and confined by means of four sutures," though Sir Astley Cooper saw fit later to modify his opinion. The formation of an artificial anus, though easily and rapidly carried out, necessitates a second operation later, and this naturally greatly increases the risk. If reliance could be placed on statistics the question would be at once settled, for Kendal Franks[2] gives the mortality after primary suture in 220 cases as only 43 per cent., while the death-rate of the cases in which an artificial anus was made was 80 per cent., and of the secondary resections 38 per cent. Zeidler[3] gives the following mortality in cases of gangrene of the bowel in herniæ in St. Petersburg:—Of 289 cases of primary resection 49 per cent. died, and of 287 cases in which an artificial anus was formed 74 per cent. died. These results are even more striking when we compare them with the statistics collected by Berry[4] of all cases of strangulated hernia in ten years in the hospitals of St. Bartholomew's, Guy's, and St Thomas's; of the 946 cases the mortality was 44 per cent, or only a little less than the mortality after primary resection. There are, however, many fallacies in these statistics of the treatment of gangrenous bowel. In the first place, many of the unsuccessful cases of primary resection undoubtedly never find their way into print; and secondly, primary resection is generally only employed in cases in fair general condition, and in all moribund cases the surgeon contents himself with making an artificial anus. Another fallacy is due to the difficulty of being certain in many cases that the bowel is really beyond recovery, and it is by no means improbable that the list of successful cases includes some in which an unnecessary resection has been made; but even when all these sources of error have been taken into account most surgeons will agree that primary resection is the preferable operation in suitable cases. Indeed, the general condition of the patient at the time of the operation is the only trustworthy criterion of the course to be adopted. Should the strangulation have been of long standing, and the patient be utterly collapsed, it is unwise to waste time in doing a resection, and an artificial anus holds out the only hope of a successful issue; but should the general condition of the patient be fair and the pulse good a primary resection offers the best chance of a cure. There is an objection to an artificial anus to which often sufficient importance is not attached; if the opening into the bowel is at a point higher than the lower part of the jejunum the lack of absorption of the products of digestion may be so great that the patient may die from exhaustion, even though taking an abundance

[1] Anatomy and Surgical Treatment of Inguinal Hernia, p. 33.
[2] THE LANCET, April 8th, 1893, p. 794.
[3] Centralblatt für Chirurgie, 1893, p. 62.
[4] Quoted by A. Bowlby, THE LANCET, April 8th, 1893, p. 795.

of food.[5] Sir William MacCormac in his Bradshaw Lecture,[6] after advocating primary resection in suitable cases, recommended that the resection should be performed at the site of the hernia in the inguinal variety, but through an abdominal section in the femoral form. Primary resection has many advocates, as Chaput,[7] C. B. Lockwood,[8] Kendal Franks,[9] F. T. Paul.[10] and Heydenreich.[11] Recently some surgeons have advised the formation of a temporary artificial anus, followed after a very short interval by a resection; the interval may be from five days to three weeks.[12] This is an important modification, which will, without doubt, be of value in cases too profoundly collapsed for primary resection.

A widow, aged sixty-two years, was admitted into St. Thomas's Hospital on Oct. 3rd, 1893, suffering from a strangulated femoral hernia on the right side. She had noticed a swelling in the groin for about two years which had gradually become larger, but without causing any symptoms. For four days before admission this had been getting harder and uncomfortable, and there had been absolute constipation; vomiting had been frequent, but only bile-tinged. On admission to hospital the hernia was tense and hard, without any impulse, the skin over it was rather reddened, and there was considerable tenderness. At 10.30 P.M. the operation was performed. The incision was the usual vertical one, and on opening the sac blood-stained fluid with a faint fœtid odour escaped. The contents were omentum and gut. The omentum was matted and considerably ecchymosed; the gut, which was hidden under the omentum, was seen to be small intestine and very dark. The constriction at the neck was extremely tight, so that the hernia knife was introduced with difficulty. After releasing the structures and pulling the gut down it was seen that the dark gut was sodden and without polish, and had been so tightly gripped as to leave nothing more than peritoneum at the neck. As the woman's condition was extremely good it was decided to resect immediately. Assisted by Mr. Abbott, the resident assistant surgeon, the matted omentum was first removed and the loop of gut was then drawn down. As the damaged bowel was four inches in length five inches of bowel were removed with the corresponding wedge of mesentery. Before doing this Makins's clamps had been put on the bowel above and below. After the section the ends of the bowel were carefully cleansed and disinfected. Bleeding from the mesentery was free and particularly from the upper angle; so much was it so, and owing to some retraction under Poupart's ligament, that the latter structure was divided across, throwing the lower part of the abdomen and hernial sac into one. This proved a great gain, for not only could the bleeding mesentery be easily dealt with and its vessels secured, but afterwards it enabled the sutured bowel to be replaced with care and not subjected to the squeezing which is unavoidable through the slightly enlarged femoral ring. The assistance of any mechanical aid to suturing was dispensed with. Beginning from the mesenteric border the mucous membrane was brought together by continuous silk sutures, taking great care to lessen the lumen as little as possible. Lembert's sutures of fine silk were next inserted in a single row, the mesenteric border being securely covered in. The edges of the mesentery were brought together with a continuous silk suture, and the re-united bowel was placed in the lower abdomen over the femoral ring. The hernial sac was removed, the peritoneum of the lower abdominal wall was sutured, and the soft parts were brought together with silkworm gut and horsehair stitches. No drainage was used and the wound was dressed with cyanide gauze. Suturing the bowel took thirty-five minutes, and the patient's condition at the end of the operation was very satisfactory. Her progress was good and for the first few days without anything to comment on. Her temperature varied between 99·4° and 100·6° F. Nutrient enemata were given and the mouth was kept moist. On the evening of the 7th (the fourth day) she passed flatus freely and the enemata were returned. On the 8th she was not quite so well owing to a feeling of discomfort in the abdomen. There was a little fulness and she had an inclination to vomit. The tongue was moist and the temperature only 99·4°. A turpentine enema was given with a good result, a feeling of relief ensuing. The bowels were opened a little naturally in the evening. On the 9th, although she felt much better generally, she had passed a restless night, with some pain and distension. On exploring the wound there were found to be present some swelling and fluctuation at the lower part. Two stitches were removed and about three ounces of offensive, fæcal-smelling, dirty pus were evacuated. As this appeared to occupy the space of the original hernia a counter opening was made and a drainage-tube was introduced and the cavity washed out with boracic lotion. From this time she rapidly recovered. There was no discharge of fæces from the wound at all. The bowels were opened naturally again on the 12th and from then generally daily. The drainage-tube was taken out on the 13th and the wound soon healed. She was up on the couch on the twenty-first day after the operation, although she was rather weak and low, which was not surprising considering her age. She soon left the hospital and gradually recovered strength without any subsequent symptoms. As lately as the middle of April she was looking strong and well without any complaint. There was bulging over the seat of the operation, and for this an ingenious truss has been applied causing pressure on both lower abdominal and femoral regions.

Remarks by Mr. BETHAM ROBINSON.—In the first place, here is another case which demonstrates the feasibility of immediate resection of gangrenous intestine and its great gain to the patient if successful. This method of treatment, still on its trial so to speak, can only be judged by the result of cases collectively, although isolated cases may show successes. Undoubtedly many, because unsuccessful, get buried in oblivion, whereas, if recorded, they might assist in arriving at a positive conclusion. That it has its place there can be no doubt, and among the failures many factors have to be considered. Secondly, it will be noticed that simple suturing was adopted—a method probably, if done with fair speed, superior to all mechanical aids so far introduced. Lastly, the age of the patient shows that this need prove no barrier to success.

[5] Sir Astley Cooper, loc. cit., p. 33.
[6] THE LANCET, Dec. 16th, 1893, p. 1490.
[7] La Semaine Médicale, March 21st, 1894.
[8] THE LANCET, March 17th, 1894, p. 672.
[9] Loc. cit.
[10] Transactions of the Clinical Society, 1892, p. 229.
[11] La Semaine Médicale, Jan. 13th, 1892.
[12] Treves: THE LANCET, March 17th, 1894, p. 673. Also H. H. Clutton: Annals of Surgery, 1894, vol. xix., p. 416.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Musical Mitral Murmurs in Connexion with Aortic Stenosis.

A MEETING of this society was held on June 8th, the President, Dr. HOWSHIP DICKINSON, being in the chair. Various alterations in the by-laws proposed by the council were adopted, with trifling modifications. The most important was one diminishing the distance from the society's house within which Fellows were regarded as "resident Fellows," with the higher rate of subscription, from fifteen miles to seven miles. The congratulatory address to Her Majesty as patron of the society, drawn up by the council in accordance with the resolution passed at the previous meeting, was approved by the Fellows and signed by the President.

The PRESIDENT read a paper on the Occurrence of Musical Mitral Murmurs in Connexion with Aortic Stenosis. Four cases were related in which a systolic musical murmur, thought to be produced by mitral regurgitation, was associated with obstruction of the aortic exit. In one the mitral valve was practically sound; in the others the mitral valve was diseased as well as the aortic. Case 1 was that of a boy who had, together with much evidence of intra-ventricular tension, an intense apex systolic murmur which had a musical tone. After death the aortic orifice was found to be almost completely closed by recent vegetations; the mitral valve was practically natural. The mitral murmur, as it was thought to be, was the only murmur heard. It was attributed to the over-distension of the ventricle due to the obstruction of its aortic exit, and to consequent leakage of the mitral valve under the abnormal pressure to which it was subjected. Case 2 was that of a man who, after having been for some time under treatment with the ordinary signs and symptoms of disease of the aortic valve, developed a murmur indicative of mitral regurgitation which was attended with a definite squeak like that of a mouse. After death the

heart was found to be greatly hypertrophied, especially as to the left ventricle. The pericardial cavity was obliterated by old adhesions. The aortic orifice was obstructed by fibroid thickening, the mitral orifice being crescentic and contracted. The sound was presumably imparted to the murmur by the intra-ventricular tension occasioned by the ventricular hypertrophy and the state of the aortic exit. Case 3 was that of an old man who displayed shortly after admission, and shortly before his death, a systolic whistle in the mitral area. The left ventricle was found to be hypertrophied, the aortic valves calcified, and the opening contracted; the mitral valve was thickened, but the orifice was not dilated. Case 4 was that of a man, fifty-four years of age, who had at the apex a distinct systolic squeak like the high note of a fiddle. The heart was found to be hypertrophied. The aortic orifice was almost closed, partly by old rigid thickening and partly by recent soft vegetations. The edges of the mitral valve were slightly thickened, as also were those of the tricuspid. The musical murmur was attributed, as in the other cases, to the occurrence of mitral regurgitation in small volume and at high pressure, the high pressure being due to the ventricular hypertrophy and the aortic obstruction. The cases recorded were held to indicate that in aortic obstruction, together with hypertrophy of the left ventricle, a peculiar tone may be imparted to mitral regurgitation, probably in consequence of the force under which it is produced.

Dr. NORMAN MOORE thought that the President had done well in drawing attention to these cases, in which the nature of the lesion had been verified by post-mortem observations. It was too often the custom to speak as if everything were known about murmurs and their production. But there were many gaps in knowledge, particularly as regards post-mortem verification. Dr. Dickinson's explanation of the condition he described was ingenious and probable, but he still felt in some doubt as to whether it was the only possible explanation. He wished particularly to know what was the character of the murmur as heard at the patient's back. Following the teaching of the late Dr. Andrew, he had been led to assume that if a systolic apical murmur was lost in passing out into the axilla, and was inaudible at the angle of the scapula, it was probably of aortic origin. Now that attention had been drawn to these cases it would be most important for future observers to go carefully into the character of the pulse, and possibly the sphygmograph might give evidence as to whether there was mitral regurgitation. Dr. Moore remarked that it was often possible to obtain information as to the origin of a systolic murmur which was audible at the base as well as at the apex by listening at the right supra-scapular fossa and at the angle of the right scapula. If the murmur were heard loudly above, but faded away on passing downwards, and was inaudible at the angle of the scapula, the murmur was probably due to aortic stenosis only; but if the murmur became clearer at the angle of the scapula there was probably mitral regurgitation associated with aortic stenosis.

Dr. DE HAVILLAND HALL said that he had met with puzzling cases which he now thought might have been of this nature, but he had had no opportunity of making pathological observations. He asked Dr. Dickinson if there were any thrill in the cases.

Mr. F. J. GANT remarked on the unfavourable influence which such a condition of the heart would have on the prognosis if a patient were attacked with pneumonia.

The PRESIDENT, in reply, said that in some of the cases there were ordinary mitral murmurs present as well as the squeak, and they were conducted into the axilla in the ordinary way. In one case the squeak was heard in the axilla, but he could not say if it was conducted to the back. In only one of these cases was the squeak associated with mitral stenosis.

OBSTETRICAL SOCIETY OF LONDON.

Parturition during Paraplegia.

A MEETING of this society was held on June 2nd, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. AMAND ROUTH read a paper on Parturition during Paraplegia, with cases. The patient was a multipara, with complete paraplegia below the level of the sixth dorsal vertebra, who was admitted into a surgical ward of Charing-cross Hospital under his colleague, Mr. Astley Bloxam, half an hour after the accident which caused the paralysis. She was then nearly seven months pregnant. For eight days uterine intermittent contractions were absent, when they became gradually more and more perceptible. After two months the patient was transferred to a special ward, and labour came on 261 days after the last menstruation without the patient feeling any pain. The first stage lasted ten hours, and the second two and a quarter hours. The placenta followed, aided by a slight "expression," in five minutes. The patient's only sensation during a "pain" was a "tight feeling" at the epigastrium, giving her an inclination to hold her breath, but this tightness was in no sense painful. As the head was passing the vulva the patient cried out, but this also seemed a reflex act and was unaccompanied with sensation of pain. The "pains" were not as well defined as in a normal case, the intermissions being often absent, as judged by the vaginal touch and the hand on the uterus. In fact, the "pains" rather remitted than intermitted. Retraction was not good for some hours, but there was no undue hæmorrhage. Uterine involution and lactation were quite normal. Death occurred six months later, and full details of the pelvic organs, the fractured spine, and the cord were given. The following views seem to be fairly established:—1. The act of parturition is partly automatic and partly reflex, these actions corresponding in the main to the first and second stages of labour respectively. 2. Direct communication with the brain is not essential to coördinate uterine action though the brain seems to have a controlling influence upon the "pains," helping to make them regular with well-defined intermissions. 3. Direct communication between the uterus and the lumbar enlargement of the cord, through the medium of the sympathetic ganglia between the first and third lumbar, is probably essential to the regular and coördinate contraction and retraction of the uterus, as occurs in normal parturition. 4. It seems also probable that the uterus is able automatically to expel its contents as far as the relaxed part of the genital canal even when deprived absolutely of spinal influence, spinal reflexes being then necessarily absent. 5. Lactation is not solely due to nervous influence, but partly to chemical changes in the blood.

Dr. MOTT remarked that he had examined sections of the spinal cord at the seat of the lesion, and had found that the crush had completely destroyed the nervous structure at the seat of the injury; but that apparently many cells in the anterior horn of the lumbar enlargement were fairly normal in appearance. Inasmuch as these were still in connexion with the uterus, this case did not prove, like the dog of Goltz, the independence of action of the uterus. He (Dr. Mott) had seen demonstrated at the International Congress at Berne the control of the sphincters in this animal, deprived previously of a great part of its spinal cord. The experiment proved that in the dog the uterus could contract effectually without cerebro-spinal influence, and that the sphincters could maintain their tonus—facts which upset all previous notions. It must be remembered, however, that the sympathetic chain and the posterior spinal ganglia remained. These are connected and probably formed the reflex arc which maintained the tonus in the sphincters. He ventured to suggest that the physiological stimulus for the blood of the onset of labour might be a bio-chemical condition of the fœtus at full term—e.g., an increase of carbon dioxide. That profound bio-chemical changes take place during pregnancy is highly probable; the enlargement of the mammary glands in this case after interruption of the spinal connexion between these structures and the uterus suggests this, and the fact that the mammary glands enlarge after all the nerves have been divided, both cerebro-spinal and sympathetic, proves that an altered condition of the blood can be the only means of bringing about disassociated functional activity in two remote structures.

After remarks by Dr. GILES, Dr. MCCANN, Dr. PEMBREY, Dr. HEYWOOD SMITH, Dr. HANDFIELD-JONES, Dr. JOHN PHILLIPS, Dr. BERTRAM ABRAHAMS, and the PRESIDENT, Dr. AMAND ROUTH replied. He agreed with Dr. Mott that the crux of the whole question was the difficulty in determining the cause of the onset of the labour at term. The cause was probably a bio-chemical one, and Dr. Mott's suggestion that this resulted from the accumulation of carbonic acid in the placental circulation was not likely to be rejected, for it was known that asphyxia produced uterine contraction and caused abortion if pregnancy existed.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL MEETING of this society was held on June 4th, Mr. W. BRUCE CLARKE, President, being in the chair.

Dr. HENRY SUTHERLAND showed (1) a case of Epilepsy, the disease having commenced after a miscarriage at the fifth month; and (2) a girl, aged nine years, with congenital absence of the iris.

Mr. MCADAM ECCLES showed (1) a woman, aged forty-eight years, with Symmetrical Nodules of a Fibrous Nature on the posterior aspects of both ulnæ; she was affected with chronic rheumatoid arthritis; and (2) a man, aged seventy-five years, with a Rodent Ulcer of the Left Axilla. There was extensive superficial ulceration, with rolled edges, serosanious discharge, and slight induration. A microscopic section of the ulcer showed the usual appearance of rodent ulcer.

Dr. H. P. POTTER showed a man, aged fifty-nine years, with Scurvy due to privation. He had extravasations on the dorsum of each foot, in the calf of one leg, ecchymosis and purpura of the legs and arms, spongy and bleeding gums, with marked fœtor of the breath. Under a liberal diet, including potatoes, he was recovering.

Mr. L. A. BIDWELL showed (1) a woman, aged fifty-one years, with a Swelling connected with the Left Wrist and another on the outer side of the Right Elbow; they were probably of a tuberculous nature; (2) a man, aged thirty-four years, with a Primary Sore affecting the Right Cheek; and (3) a girl, aged seventeen years, who had had a Swelling just above the Hyoid Bone for ten months. This swelling had gradually increased to the size of a hazel nut.

Dr. BURRELL showed two cases of Mucoderma.

Dr. SEYMOUR TAYLOR showed a man, aged fifty years, who had had an Injury to his Head twelve weeks ago, when he was admitted to hospital in a comatose condition, with hæmorrhage from the right ear. He now has facial palsy, loss of taste in the right side of the tongue, and paresis of the right side of the soft palate; there was no deafness. The diagnosis was fracture of the petrous bone or hæmorrhage into the aqueduct of Fallopius.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on June 2nd, the President, Dr. ARGYLL ROBERTSON, being in the chair.

Mr. CATHCART showed a woman on whom he had successfully operated for Perforation of a Gastric Ulcer. He had seen the case seven hours after the onset of the symptoms and agreed with the patient's medical attendant that they were due to the condition indicated. At the operation it was found that the peritoneum generally was not affected. The perforation was found on the posterior wall near the lesser curvature. It was closed by folding in the edges and stitching the opposed surfaces together. He washed out the lesser peritoneal sac. The patient made an excellent recovery and was in better health than she had experienced for years.

Dr. STEWART STIRLING showed a child with Psoriasis in whom the distribution was unusual.

Dr. NORMAN WALKER showed a girl with Scleroderma of the Upper Arm, which had improved under the internal administration of thyroid extract combined with baths and massage.

Mr. MILES showed a specimen of Hydrocele of the Cord obtained as the testicle had to be removed for strumous disease. He also showed the bones from a case of Middle-ear Disease in which death was due to septic meningitis, notwithstanding free opening and other measures. The case clinically presented several of the characters of cerebral abscess.

Dr. ALEXANDER BRUCE made a communication on the Endogenous Fibres of the Lumbo-sacral Region of the Cord. These fibres occupy a small area on the posterior aspect of the cord at the side of the posterior fissure, and another area anterior to the postero-median column. These two areas were unaffected in locomotor ataxy, but were degenerated below the seat of lesion when the cord was destroyed transversely. He believed that the fibres in these tracts contained fibres derived from the posterior horns and united different levels of the cord. He held that the fibres had a downward course in the cord. The communication was illustrated by an admirable lantern demonstration and by sections shown under microscopes.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Distension of the Bladder with Air in Supra-pubic Cystotomy.—Pyloroplasty.—Fracture of the Metacarpal Bone of the Thumb.

A MEETING of this section was held on May 14th, Mr. WILLIAM THOMSON, President, being in the chair.

Mr. JOHN LENTAIGNE exhibited an apparatus for distending the bladder with air in the operation of supra-pubic cystotomy. It consisted of an indiarubber air-pump with reservoir of the same material, similar to that used with the ordinary hand spray. This was attached by means of a rubber tube to a silver catheter, which was introduced into the bladder. In using the apparatus the reservoir was first distended with air, which was then allowed to gradually distend the bladder, and the operation was then performed. If it became necessary to force the bladder forward in the wound pressure was made on the reservoir outside. Mr. Lentaigne had used this apparatus in a recent case, in which he had closed the bladder wound with catgut sutures, and the entire wound had healed by first intention.

Mr. LENTAIGNE also exhibited a patient on whom he had performed the operation of Pyloroplasty on Feb. 26th last for fibrous stricture of the pylorus with great dilatation of the stomach. The healing of the wound had been uneventful, and the patient, who was now apparently in perfect health, had gained over 2st. in weight.—Mr. MYLES said that if the operation of pyloroplasty took two hours in the hands of a skilful operator it compared very unfavourably with the operation of gastro-duodenostomy, which could be done in about twenty-five minutes. The results of the latter operation were also very favourable.

Professor E. H. BENNETT gave some further particulars in relation to the Fracture of the Base of the Metacarpal Bone of the Thumb in addition to those which he published in 1881 and in 1886. Continued observation has fully established this injury as the commonest metacarpal fracture. Photographs taken with the x rays confirm the view he had published as to the path of the fracture passing obliquely through the base without implication of the dorsal surface of the bone.—Mr. SWAN said that many surgeons had considered the injury to be a dislocation; it was not until he read Professor Bennett's communication in the *Dublin Quarterly Journal* of 1881 that he understood the nature of the injury.—Sir WILLIAM STOKES said that they owed the description of the injury to Professor Bennett, who had received very full recognition by eminent writers, not only at home, but in France and Germany, for having given the best description of the injury.

Reviews and Notices of Books.

A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, B.A., M.D., B.Ch., B.A.O. Dublin University, L.R.C.P. Irel., L.M., Assistant Master, Rotunda Hospital. With a Preface by W. J. SMYLY, M.D., F.R.C.P. Irel., late Master of the Rotunda Hospital. With 45 Illustrations and an Appendix containing the Statistics of the Hospital for the last Seven Years. London: J. & A. Churchill. 1897. Price 6*s.*

DR. JELLETT has written this little book partly at the request of several of his pupils, and partly as an exposition of the principles that govern the practice at the Rotunda Hospital. There is an interesting introductory preface by Dr. Smyly, who indicates some of the main points in which that practice differs from what is generally taught elsewhere, and he expresses his responsibility for them.

Foremost among these may be mentioned plugging the vagina in cases of accidental hæmorrhage. Formerly, Dr. Smyly tells us, his custom at the Rotunda in all serious cases of accidental hæmorrhage was to rupture the membranes. The results under this treatment were not at all favourable. Latterly, therefore, he has altered his practice, and now in all cases of external accidental hæmorrhage, when the pains are absent or slight and the membranes are intact, he plugs the vagina tightly, and under this form of treatment the results have shown a great improvement.

There is a very excellent chapter on the subject of Antiseptics in Midwifery. The bacteriological condition of the vulva, vagina, and cervix is carefully described, as well as the means provided by nature when labour is normal and free from interference to protect the mother from any evil consequences. It is recommended that the external genitals and skin round should be washed thoroughly with soap and water. If any intra-uterine operation is about to be performed the vagina is disinfected as well. This is done by first douching with creolin solution (half an ounce to a gallon), then scrubbing its walls with a clean piece of soap and the fingers, and then douching again. Dr. Jellett objects to the use of corrosive sublimate in vaginal douching, as, apart from the possibility of poisonous effects, it causes roughening and brittleness of the vaginal mucous membrane, making it more likely to crack, and so facilitating the introduction of septic matter. The advice given as to the disinfection of the hands is altogether satisfactory, and we quite agree with him as to the employment of lubricants. "Avoid," he says, "the use of lubricants if possible. Carbolised vaseline is never safe, particularly when kept in a box into which dirty fingers are introduced from time to time." He prefers soap which has been boiled in the making as a lubricant if the outer layer is first washed off. We think, however, that perchloride glycerine (1 in 1000) is more convenient and reliable for this purpose.

In the chapter on Craniotomy and Embryotomy a Winter's modification of Auvard's combined cranioclast and cephalotribe is recommended, which is little known here and would seem to be worth trying. As regards the conditions necessary for performing craniotomy we do not quite agree with the author that the conjugata vera must measure more than two and a half inches. It is quite true that even in a flat pelvis with a true conjugate of that value craniotomy or cephalotripsy may be an extremely difficult operation, but it is not by any means always so, still less is it impossible to perform it. Nor can we agree that "the extraction of even a perforated head through a pelvis which is smaller than this is so dangerous that it should not be attempted." Perhaps this is meant to apply to those with only an ordinary amount of experience. But obstetricians of large experience at the present time have certainly not had reason to agree with the extract just quoted. Dr. Smyly tells us that he has with the greatest reluctance abandoned the use of chloroform in puerperal eclampsia. He thinks that chloroform does not save the patient's life, but on the contrary increases the chance of a fatal issue. He prefers morphia—half a grain is given hypodermically when the first fit occurs, and is followed every two hours by a quarter of a grain till the fits cease; not more than two grains are to be given in the twenty-four hours.

The book is clearly and concisely written. It appears to us admirably suited to the student; we may add that it also contains much that should make it useful to the practitioner.

JOURNALS, REVIEWS, &c.

The contents of the *Medical Magazine* for June are a little disappointing. A good paper by Mr. Poyntz Wright defines the various relative powers, duties, work, status, and mode of appointment of county medical officers of health, local district health officers, and sanitary inspectors, and will be found instructive reading; but is the author not a little hard upon district councils when he sweepingly speaks of their "bigoted prejudice," "supineness," and "inveterate obstinacy"? In our opinion these councils are remarkable chiefly for their willingness to be led. If the moving spirit is liberal-minded the council is on the side of the true public weal, but if the most important man on the council is a reactionary and ignorant man short-sighted methods will follow. Of the rest of the contents the most noticeable is a short article by Dr. Pye-Smith, F.R.S., upon the complicated question of the University of London—a sequel to a previous contribution. The reader will find in this article a lucid statement of the present difficult situation.

Belgravia contains an informatory article from the pen of the editor, entitled "Sixty Years of Healing." The subject is the work of the London hospitals during the present reign, and there is no doubt that the publication of such papers in magazines stimulates popular charity by bringing home to general comprehension the magnitude of the work undertaken by the greatest of the metropolitan charities. The article is not exhaustive, and several institutions that have obtained no mention are much more worthy of notice than several whose claims are urged; but the information here collected concerning the income and expenditure of the hospitals is not often seen outside the columns of the medical journals, and will therefore appeal as something fresh to a lay public.

The *Inter-colonial Medical Journal of Australasia* contains among other papers an interesting communication by Dr. R. R. Stawell upon Thyroid Gland Extract as a Galactagogue. The value of a reliable medicine that would promote the secretion of milk would be immense, so that Dr. Stawell's results will have an interest for many practitioners. He details only nine cases, and, while admitting that this is but small clinical experience from which to generalise, concludes with some reservations that extract of thyroid gland is an efficient galactagogue. The dose given was from three to five tabloids per diem. In view of Dr. Stawell's results we think that medical men are justified in giving the treatment a trial.

In the *Phonographic Record of Clinical Teaching* for May Dr. Poore, in a lecture on Writer's Cramp, points out that the cause of the failure must be looked for anywhere "between the motor cortex and the tips of the fingers," and there is always some other defect than the inability to write. Dr. Poore has never examined a case without finding something definitely amiss, some wasting, tremor, paralysis, or something wrong with bones or ligaments, and the defect may be the forerunner of hemiplegia, a symptom of lateral sclerosis, or a result of lateral curvature of the spine. Mr. Jones Greer, writing from personal experience of West Africa, advises those who proceed to that white man's grave to maintain a high standard of personal health by the avoidance of excesses of all kinds, by keeping regular hours, by the use of the morning tub, and by boiling all drinking water if it appears of doubtful quality. On feeling out of sorts ten grains of quinine should be taken with a little whisky, and the patient should go to bed and perspire freely. In the treatment of the endemic fevers hyperpyrexia is best treated by antipyrin, phenacetin, and the cold bath, rather than by quinine. Not more than thirty grains of quinine should be given in twenty-four hours, and the quantity should be gradually diminished as the fever subsides. A shorthand edition of Dr. Gowers's lectures on the diagnosis of diseases of the brain, brought up to date, is announced as nearly ready for issue.

THE LANCET.

LONDON: SATURDAY, JUNE 12, 1897.

THE attention of Parliament is again to be directed to the question of lunacy reform. It has been found expedient further to amend the Lunacy Act of 1890, and a Bill has been issued with this object. The Act of 1890 was a measure of great importance to the public generally, and to those engaged in the care and treatment of the insane. Although defective in many respects it possessed one strong redeeming feature, for under its provisions the various Acts which had been passed from time to time were consolidated, and it became possible to ascertain with some degree of precision the relation of the law to the various classes of patients and to those responsible for its due observance. The Act was doubtless framed with good intentions, and in providing additional protection to the public, in multiplying the safeguards and privileges of patients, in placing the private patient on a nearer equality with the pauper so far as orders of detention are concerned, and in other ways its operation has been attended with beneficial results. On the other hand, owing to faulty draughtsmanship and to somewhat hasty legislation, many of its provisions are defective, others are irritating and vexatious, the meaning of many of the sections is by no means clear, and the increased burden of clerical work thrown upon the medical officers of asylums constitutes a grievance which time and custom have served only partly to modify. The necessity for further amendment is abundantly evident. The new Bill, which attempts to remedy a number of deficiencies, contains thirty-nine articles, or rather clauses, to which those engaged in asylum work must be prepared to subscribe, unless, indeed, the Bill is amended in its passage through the Legislature. It would be inexpedient to dwell at length on the changes dealt with in the various clauses, but some of the more salient features may be alluded to. It is proposed to curtail the time during which an urgency order is to remain in force from seven to four days. Further, the person who signs an urgency order and the medical practitioner who signs the medical certificate on which the urgency order is founded will in future be required to furnish an accompanying statement showing that it is necessary for the safety and proper treatment of the alleged lunatic, or for the safety of others, that he should be forthwith placed under care and treatment. The statement must also show fully and specifically why an urgency order is requisite. This regulation may be regarded as too stringent; it cannot fail to add to the perplexities and difficulties which so frequently confront the certifying practitioner, and it certainly will not tend to lessen his medico-legal responsibilities. Many medical men absolutely decline to sign lunacy certificates, and many more are likely to refuse should this rule come into force. In doing so they will act wisely both for the sake of their pockets and for their peace of mind.

One gratifying feature of the new Bill is the recognition of the claims of asylum officials to assured pensions and allowances. This important concession, too long withheld, will materially improve the prospects of the various grades of officials, and they will experience a feeling of relief from the state of uncertainty in which the question has been involved for such a length of time. Indirectly also the interests of the patients will be promoted, because fewer changes are likely to take place amongst the members of the subordinate staff, and the longer experience gained will render their services increasingly valuable. The proposed pension scheme is based upon the Poor-law Officers' Superannuation Act, 1896. It is directed that the provisions of the said Act shall apply to the visiting committee and to every officer of an asylum, in like manner, as nearly as may be, as they apply to guardians and their officers and servants, subject, however, to several modifications. A Secretary of State is substituted for the Local Government Board wherever the Local Government Board is referred to in the Poor-law Officers' Superannuation Act, 1896. The following are some of the principles contained in the Poor-law Act cited above—compulsory superannuation, compulsory retirement, transferred service to reckon as pension, power to add a number of years not exceeding ten in certain cases for peculiar professional qualifications or special circumstances, and power to grant gratuities in certain cases. Section 24 of the new Lunacy Bill empowers the visiting committee of an asylum to grant allowances or gratuities in cases of injury. When an officer of an asylum is injured in the actual discharge of his duty and through no fault of his own, the visiting committee may grant him an annual allowance, or in case of death from the injury they may grant to his widow or mother and to his children, or any of them, such annual allowance or gratuity as they, the visiting committee, may consider reasonable. Certain restrictions are appended as to the amount to be paid, but the scale seems just and fairly liberal. The pension scale is one-sixtieth for every year of service, the maximum of two-thirds not being attainable till after forty years' service; and there is an annual contribution to the pension fund of 2, 2½, and 3 per cent., according to the length of service. Any existing officer of an asylum may signify his intention within three months from the commencement of the new Act of not availing himself of its provisions. The discussion of the pension question some years back revealed very opposing views among asylum superintendents; whether they will be satisfied with the scheme set forth in the new Bill remains to be seen. Their claims to a higher rate of pension are deserving of every consideration, for their whole time is devoted to the service, and their duties are trying, onerous, and frequently dangerous; any endeavour on their part to get the Bill amended in this particular will, we trust, meet with deserved success.

It has been the custom for many years at the State Criminal Asylum, Broadmoor, to allow the patients a certain amount of remuneration for work done. Under Section 28 of the new Bill this principle has been

adopted; with the object of extending the useful occupations of patients and encouraging them to engage therein, the visiting committee are empowered to remunerate each pauper lunatic for his labour in the asylum at a rate not exceeding one-tenth of the sum at which the committee may estimate the value of the labour, and the remuneration so allowed shall be paid or applied for his benefit in such manner as the committee may direct. This is a wise and judicious step. No doubt the adoption of this principle will mean increased clerical work, but as substantial benefits will accrue to the patients no one will grudge the additional trouble. It is to be hoped that the money credited to patients will not be frittered away in providing them with small additional luxuries at their own request. Rather ought it to be allowed to accumulate and given to the patient when discharged on recovery, or distributed for the support of his family whilst he is under detention. The scheme, if well applied, ought to work beneficially; small difficulties will have to be surmounted in carrying it out, for a perverse lunatic with a balance at his credit on the asylum books is likely to prove on occasion a source of worry to the authorities. A long-recognised want is met by giving the Commissioners power to license houses to be used solely for the reception of idiots and imbeciles. In future all branch establishments must be registered. Heavy penalties are attached to any mis-statement wilfully or negligently made in connexion with an urgency order, or in any petition or reception order, or in any medical or other certificate. With regard to hospitals registered before the commencement of the Act of 1890, the Commissioners shall have power to certify the number of patients to be received, and dire consequences in the shape of fine or imprisonment, or both, are in store for the superintendents of such hospitals should they receive any patient or boarder in excess of the number so certified. Other important subjects are considered in the Bill—e.g., the appointment of magistrates, special inquiries as to lunatics, regulations as to infectious maladies, offences against patients, jurisdiction of Masters in Lunacy, &c. We regret that no mention is made of strengthening the Lunacy Commission by Deputy Medical Commissioners as in Scotland. There were six Commissioners in 1847, there are six now, yet the numbers of lunatics coming under their official supervision have increased sixfold in the space of fifty years.

The new Bill marks a great step in advance in the history of lunacy legislation; no doubt it is capable of amendment in various particulars, but on the whole it may be regarded as an honest attempt to simplify the working of a very difficult and a very intricate subject. We trust that it will prove an additional protection and a lasting advantage to all classes of the insane, and that those engaged in their care and treatment will "under its provisions" reap the benefits to which their arduous and difficult duties fully entitle them.

THE county of Surrey offers many facilities for an investigation into the influence of water-supplies upon health, as it comprises districts having mainly a river water-supply, as Weybridge and Walton; districts supplied from the lower greensand, as Dorking; and districts supplied from the chalk, as Reigate. The fact that these districts are somewhat sparsely populated and present somewhat varying social conditions furnishes difficulties and sources of fallacy, for which allowances must be made. The immediate occasion for Dr. SEATON'S report[1] appears to have been the apprehension created by the events of recent years at Worthing and Newport as to the dangers associated with public water-supplies from the chalk. It would appear that a water-supply from the chalk may be either the purest in respect of organic pollution or the foulest when exceptional and unexpected contamination occurs. The fact that sites on the chalk formations are not infrequently chosen for building large public institutions, which owing to their remoteness from any main system of sewerage are usually drained into soaking cesspools, while chalk in the neighbourhood not infrequently furnishes the public water-supply, gives the subject an added importance. It was brought prominently to the attention of the Surrey local authorities in 1894 by an application to the Local Government Board to borrow £2500 for the purpose of purchasing eight acres of land on Banstead Downs, whereon to erect an isolation hospital for infectious diseases. Objection was made to this site on behalf of the Sutton Water Company. This company derives its water from deep wells in the chalk two and a half miles distant from the site of the proposed fever hospital. Inasmuch as it was proposed to set one and a half acres of the site apart for the treatment of sewage by sub-irrigation and intermittent filtration of all the sewage—except that of enteric patients, which would be cremated—it is difficult to conceive how the water in the Sutton wells could be contaminated. Mr. BALDWIN LATHAM, however, was of opinion that impurities might be carried by fissures in the chalk to the wells of the company, and stated that he knew of fissures in the chalk much longer than two and a half miles. If such objections as this are to hold good, it evidently would be practically impossible to find a site for large public institutions upon the chalk at all. It is satisfactory therefore that the Local Government Board have granted the loan applied for in the above case. Cases like the preceding show the great practical importance of the subject dealt with by Dr. SEATON. The statistical part of this report consists of a comparison of the death-rate per 1000 during two periods of ten years in four selected districts,—Chertsey (water-supply river, supplemented by shallow wells), Dorking (lower greensand), Reigate (largely chalk), and the Sutton, Carshalton, Leatherhead and Epsom district (almost entirely chalk). In the Chertsey district the death-rate from "fever" fell from 2·4 per 10,000 in 1876–85 to 0·8 in 1886–95; while during the same period it fell in the Dorking district from 1·8 to 0·46, in the Epsom district from 1·1 to 0·43, and in the Reigate district from 1·2 to 0·53.

From these data Dr. Seaton draws the conclusions that (*a*) a marked diminution of typhoid fever has occurred in all these districts; (*b*) that this diminution has been more marked in the districts deriving their water-supplies from the sand and river; but that (*c*) the figures relating to deaths are small, and do not admit of any decisive conclusion, further watching being required, so that conclusions may be revised in the light of the sickness returns now

[1] Annual Report of Dr. Seaton, the medical officer of the administrative county of Surrey.

becoming available. The following important general conclusion is stated: "So far as chalk water-supplies are concerned, it seems impossible to show that there has been any evidence of their having produced any notable ill-effects as regards typhoid fever." With this conclusion we entirely agree; but it appears to us that the above statistical data, though necessarily based on a somewhat scanty number of deaths, may serve to justify certain additional conclusions which Dr. SEATON has refrained from stating. In the first place, a comparison of the four districts shows that the districts having their water-supply from the chalk had a much lower death-rate from typhoid fever both in the first and in the second decennium than those deriving their water from other sources. Consequently the scope for improvement was much smaller in the chalk districts than in the others. That the mortality from typhoid in the Chertsey district should become reduced by about two-thirds might be expected with improved filtration of its river water, but that Epsom and Reigate should improve by about one-half without any filtration works, appears to indicate that causes are in operation other than the water-supply. In the second place, notwithstanding the smaller scope for improvement, the chalk water-supplies maintain in the second decennium their superiority over the non-chalk water-supplies, as indicated by mortality from typhoid fever. These facts appear to us to give additional importance to the part of Dr. SEATON'S report in which he discusses the question of the origin of typhoid fever apart from polluted water-supplies. The two great water-borne diseases are undoubtedly cholera and typhoid fever, and it has become the fashion to assume that the practical elimination of these diseases is entirely a question of the purity of the water-supply. This fashion Dr. SEATON very ably combats. "In 1879," he says "it had become evident to me that the persistence or endemic prevalence of typhoid fever year after year in districts which I knew to be above suspicion as regards purity of water-supply was incompatible with the assumption that typhoid fever was wholly, or almost wholly, water-borne. The further fact that this endemicity, or persistent prevalence, subsequently disappeared, apparently under the influence of improvements in sanitation (consisting mainly in the control of excremental or filth nuisances), quite unconnected with water-supplies, supplemented the negative evidence by that of a positive character." In England and Wales the death-rate per million from typhoid fever has declined from 277 in 1876–80 to 135 in 1891–94. It might, however, have been expected to be even greater than this, as Dr. SEATON points out, "had impurity of water-supply been the great main factor determining the presence of the disease."

With many other interesting points in this report we have not left ourselves space to deal. It may serve briefly to indicate a few of these. The copious water-bearing resources of the lower greensand in the Hind Head district, are emphasised. The report animadverts upon the reckless waste of water of high organic purity, obtained at the expense of pumping from deep subterranean sources. After a careful consideration of the relative value of the chemical and bacteriological examination of water, they are placed in their true position as "supplementary or auxiliary to inquiry of a medical nature which has generally been spoken of as epidemiology." With Dr. SEATON'S main conclusions most people will, we think, agree. Chalk water should be taken, when the cretaceous formation is on the surface, from sources as remote from the population as practicable. Soaking cesspools in water-bearing chalk or sand should be disallowed. The provision of sewerage systems is as necessary for the prevention of underground pollution in water-bearing strata as for the prevention of pollution of rivers. Finally, a systematic study of the movements of underground water in water-bearing strata is essential "in order to acquire better knowledge of the facts connected with this problem."

THE foundations of the antitoxin treatment were laid in 1890. In that year BEHRING and KITASATO, in their experimental researches on tetanus and diphtheria, discovered that the blood serum of animals rendered immune to the toxins of these diseases was capable of transmitting that immunity to other animals in which it was injected. The subsequent extension of this discovery to the actual arrest of the effects of the virus in inoculated animals led to the introduction of what has been called serum-therapeutics, and, in the case of diphtheria at least, the results of the treatment have been of a striking character. There has been ample opportunity for testing its efficacy, for diphtheria is a disease the prevalence of which is notorious and its share in child mortality is regrettably large. It may be recalled that at the International Congress of Hygiene at Budapest in 1894 Dr. ROUX, of Paris, adduced figures from his experience of the use of diphtheria antitoxic serum that at once attracted attention, for he stated that the continuous employment of this method of treating diphtheria at the Hôpital des Enfants Malades from February to July, 1894, had been followed by a reduction in the diphtheria mortality from 51·7 per cent.—the average of the previous five years—to 24·5 per cent., whereas the rate during the same months at the Hôpital Trousseau had been as high as 60 per cent. This statement alone sufficiently explains the welcome that was accorded to the new practice, and since that day the trials of the remedy, the conditions of its use, and many other facts concerning it have been published in all quarters of the globe. The testimony in its favour has been very large.

It is true, however, that here and there scepticism lingers, and figures have been quoted that seem to tell a different tale. Yet these contrary statements only serve to confirm the general opinion as to its value, for on scrutiny they are deprived of their significance. Thus in a monograph which has recently appeared Professor GANGHÖFNER,[1] of Prague, after detailing the facts advanced on all sides in support of the claims of the remedy, mentions that adverse opinions have been expressed by Professor SORENSEN, of Copenhagen, Professor KOHTS, of Strasburg, and Professor MÜLLER, of Halle. Dr. GANGHÖFNER, however, points out that in each instance conclusions have been drawn on too slender a basis and without adequate trial of the serum. Professor SORENSEN published two papers on

[1] Die Serum-behandlung der Diphtherie, von Dr. F. Ganghöfner (Heft I. des I. Supplementbandes des Handbuchs der speciellen Therapie innerer Krankheiten, herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing). Jena: G. Fischer. 1897.

the subject. In the first he contrasts his experience of 51 cases treated with the serum with 48 not so treated. In each series the mortality was 33 per cent., but, believing that the injections favoured a tendency to hæmorrhage, he seems to have used them with great caution, giving only small doses and often delaying the administration for days. Seeing that the success claimed for antitoxin mainly rests upon its earliest possible administration, and that, too, in ample dose, Professor SORENSEN'S negative results are not surprising. In a further return Professor SORENSEN records 9 deaths in 80 cases treated by the serum, but only 5 deaths in 140 without serum, but here the fallacy of selection renders the comparison useless, since the serum group contained twice as large a proportion of severe cases as the non-serum group, and, moreover, in 8 of the 9 fatal cases the serum was not injected until the third to the fifth day. Professor MÜLLER'S figures from the Halle surgical clinic, showing a mortality of 50 per cent. after tracheotomy amongst cases treated by serum, and of 40 per cent. amongst those not so treated, are also open to the criticism that in three-fourths of the former class the injections were delayed until the fourth or fifth day, and in some were of very small amount. The figures of Professor KOHTS, also based on the mortality after tracheotomy, showed but slight difference between the two classes, only his cases were too few in number to allow of any definite inference. Yet even here the mortality was much lower than the average for the preceding five years. But in all these comparative statistics there lurks the great fallacy due to the selection of cases submitted to antitoxin, some cases being untreated because of their mildness and others because the subjects were moribund on admission to hospital. This fallacy has been obviated in the statistics furnished by the medical superintendents of the hospitals of the Metropolitan Asylums Board by contrasting the relative mortality of all cases in the year 1896 (including those in which antitoxin was used and those in which it was not used) with that obtaining in the year preceding the introduction of the antitoxin treatment. The results of that comparison will be found in our last issue, and we may remark that they harmonise with the admitted fact that as a whole the death-rate from diphtheria, not only in London, but in all great centres, has fallen since the introduction of the remedy. As regards these statistics of the Metropolitan Asylums Board attention should be particularly directed to the most striking reduction of mortality effected in those patients coming early under treatment—a fact in favour of the remedial action of antitoxin which is demonstrated with especial force in the case of post-scarlatinal diphtheria, where it was mostly possible to carry out the administration very early indeed.

The utility of the treatment does not rest solely upon statistics, which, however carefully compiled, are open to fallacies due to the varied conditions which must of necessity prevail. It depends quite as much on the general consensus of opinion amongst those physicians who have fairly employed the serum that its use is followed by results no whit less certain than those which are ascribed to other drugs believed to have a specific action. Thus in prescribing antitoxin the physician feels sure of obtaining results as definite as those which ensue on the administration of quinine in ague or salicin in rheumatism. These effects consist in the main in the cessation of the spread of the diphtheritic membrane, its speedy deliquescence, together with a corresponding diminution in the intensity of the local inflammation. It is probably owing to this striking action of the arrest of the local process that under this treatment fewer cases of laryngeal diphtheria are now operated upon and that the percentage of recoveries after operation is larger than it was. How can this be explained except on the ground that the antitoxic serum acts directly upon the virus, preventing further mischief, although impotent to remove lesions already established by the poison? Nor can any objection to its use be based on the fact that certain complications seem to have become more frequent, for if through its agency in certain cases life is prolonged or preserved it would be in these very cases that one might expect the effects of the original virus to be most manifest. It is gratifying to have the assurance of the medical superintendents of the fever hospitals that in all their wide experience they have not met with any effects attributable to the injection itself which were of a nature to cause anxiety. It is true that since its general adoption there have been a few isolated instances of apparent fatal injury, but according to those who have investigated such cases they are one and all capable of other explanation. Even in the case of the most remarkable, and in its circumstances the most painful, of these, which occurred at Berlin last year, it is confidently affirmed that the fatal result must be attributed to cardiac paralysis excited by violent coughing from the inhalation of vomited matters in a susceptible subject, and not to the direct action of the serum or its injection. The subject is discussed in Professor GANGHÖFNER'S monograph, where the grounds for this conclusion are entered into. The case referred to was the more distressing from the fact that the injection was being practised, not for treatment, but for prophylaxis. It is, indeed, remarkable, considering the short time that has elapsed since the method was introduced and the necessarily tentative nature of its application, that so large an amount of confidence should have been awarded to it. This fact by itself surely testifies to its efficiency, and encourages the hope that with time and experience still more favourable results will be obtained.

Annotations.

"Ne quid nimis."

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON: A ROYAL JUBILEE PROCESSION PROGRAMME.

AN illustrated programme of the Royal Jubilee Procession, authorised by H.R.H. the Prince of Wales, will be published in aid of His Royal Highness's Hospital Fund for London, to which the entire profits will be devoted. The programme will contain detailed particulars of the procession, and sixty-four pages of illustrations will run throughout the pamphlet, with descriptive letterpress underneath. It will be published at one shilling, and will be on sale four or five days

before the day fixed for the procession, and will form, not only an illustrated guide, but an interesting memento of the day. Our readers, who will remember that last week we advocated exactly this scheme, will join with us in congratulating the officials of the Hospital Fund upon its adoption. We make bold to prophesy that their enterprise will receive substantial reward.

THE PRESENT OUTLOOK FOR THE YOUNG GENERAL PRACTITIONER.

CLUB practice at contract rates and the readiness with which hospitals admit patients combine to render the present outlook for the young general practitioner a far from hopeful one. "If he has means, if he has influence, his success may perhaps be assured; if, without these, he has the good fortune which is the lot of some men, he may find that the lines have fallen unto him in pleasant places; otherwise, he will find that the path is a very stony and a very steep one." So writes a correspondent to us with great truth, continuing: "These reflections are prompted by the fact that, in almost every issue of the journals, one reads that a motion has been passed at a given meeting condemning the acceptance of appointments of a specified nature. It is not fully realised that this affects almost solely the younger generation; it shuts against them another source of employment, already too scanty. The younger men are, as a rule, as eager as their elders to defend the best interests of the profession, but they have a right to ask that they may receive some return for their allegiance and may not be left thereby in a worse plight than formerly. For the settlement of the club question the active support of those who are fortunate enough to draw adequate fees is required, as well as a vigorous and united effort on the part of those already engaged in club practice. The reform of hospitals affects mainly consultants whose reputation is built up upon their hospital appointments; if these continue to place their own interests above those of the profession, they, and not the younger men, are to blame if the latter by these very abuses are driven to work on terms which they know are undignified, but which, by the stress of circumstances, they are compelled to accept."

THE PREVALENCE OF BOVINE TUBERCULOSIS AND ITS POSSIBLE EXTINCTION.

EVERY now and then public attention is called to the great and probably increasing prevalence of tuberculosis among cattle or, more correctly, among cows; for, if we had no more precise information, the disproportion between the 3 per cent. or less of carcasses in the meat markets in which the most careful inspection detects the evidence of disease and the 30 to 60 per cent. or more of cows on dairy farms in which the tuberculin test proves it to be present would be enough to show that tuberculosis is practically restricted to the latter. For the bullocks roaming in the open field or mountain pasture enjoy comparative exemption, and the tuberculous meat in the market is almost exclusively the flesh of cows fattened for the butcher either on account of their age and lessening yield of milk, or from their showing symptoms of the disease in its earlier, though easily recognised stages. There can be no doubt that, though their flesh may at this period be consumed without danger, its quality is deteriorated and its money value proportionately reduced, and that, though their milk may not be already infective, it may at any moment become so, should the glands of the udder be implicated. Unlike human beings, horses, and dogs, cows are notoriously stolid and undemonstrative even when suffering from grave disease, as tuberculosis or cancer; but it is strange that, on grounds both of danger to the public health and of pecuniary loss to the owners, farmers should be so apathetic as to the existence of a disease the aggregate loss from which must be greater than that caused by occasional outbreaks of such affections as pleuro-pneumonia. Tuberculosis, however, being, like other specific diseases, the microbes of which cannot perpetuate themselves for long out of the living body, contracted, whether directly or indirectly, solely by contact or association with other individuals already suffering from it, could be extinguished by rigid segregation and isolation of the healthy from the diseased. Such a procedure cannot indeed be seriously thought of with regard to human beings, and the futility of quarantine and sanitary cordons to arrest the spread of the highly infectious cattle plague has been as conspicuous here as in the case of cholera; but the conditions under which cows are kept on dairy farms, while calculated to favour, if not to render inevitable, the spread of any infectious disease, are also such as to present every facility for the elimination of tuberculosis, requiring as it does for its communication close and prolonged association. The observations of Koch on rodents, of Bang on cattle, and of Boltz on children, not to mention other names, furnish abundant evidence as to the extreme rarity of direct transmission from parent to offspring. Congenital tuberculosis is in the highest degree exceptional, the progeny of tuberculous parents being almost always born free from the disease and remaining so if removed to healthy surroundings immediately after birth; while in the characteristic reaction produced by the injection of tuberculin there is a well-nigh unerring means of diagnosing the existence of the disease, if not in its very earliest beginnings, at any rate at a stage when it is presumably not as yet communicable to others. Bang, whose procedure has been carried out successfully on numerous estates in Denmark, has shown that it is possible to eliminate tuberculosis from a herd in the course of two or three years, without having recourse to the drastic measures employed in the case of cattle plague and pleuro-pneumonia, and with little or no pecuniary loss at the time, but with a great gain in the end. His method consists in testing the entire stock by one or two injections, and the removal of all those that react to a separate establishment at as great a distance from the others as possible. All new purchases are tested in like manner, and the process of inoculation of the apparently healthy animals, with the separation of those that react, is repeated every six months until they cease to give any result. Those that give evidence of being tuberculous are fattened for the butcher, but if already in calf or but very slightly diseased they may be allowed to calve once, or perhaps twice, provided their milk is not used for any purpose except for feeding pigs, and that after being boiled, their calves being transferred at birth to the healthy establishment and tested when about six months old. If public opinion in this country be not ripe for compulsory legislation, it is much to be desired that the county councils should at any rate encourage the practice by diffusing information on the subject and by providing free of cost a supply of tuberculin and the service of expert veterinary surgeons to perform the inoculations and direct the subsequent arrangements.

KISSING THE BOOK.

AS mentioned in THE LANCET of May 29th, p. 1518, the subject of the administration of oaths has again come before the House of Commons in the form of a question put by Sir Walter Foster to the Attorney-General. While it is satisfactory to notice that the learned gentleman promised to consider whether any further amendment of the law was required, this promise was preceded by two statements, both of which are open to criticism. The first is Sir Richard Webster's expression of opinion that the fear of infection alluded to in Sir Walter Foster's question had

been somewhat exaggerated. Even if this were simply a matter of opinion it is surely rather one to be decided by the medical profession than by the lawyers. But if Sir Richard Webster will devote an hour of his leisure during the Whitsun recess to the practical study of the administration of oaths as seen during the hearing of the night charges in any of the metropolitan police-courts he may be induced to see that it is a matter of fact, rather than of opinion, which cannot be exaggerated. Let him carefully scrutinise each witness as he or she comes up to the book to be sworn and ask himself if he would like to touch or kiss the same book? Let him also ask what will be the effect if one of these days the fact of infection with some disease should be traced to the book beyond all doubt? Will the infected witness have his remedy in an action for damages, and, if so, against whom? Moreover, Sir Richard Webster pointed out that "under the provisions of the Oaths Act of 1888 witnesses were now permitted to take the oath in the Scotch form, in which it was unnecessary to kiss the book." But he must have known perfectly well when he made this statement that numerous cases have been published in THE LANCET and in the daily press in which witnesses (chiefly medical) have been denied this legal right by those whose duty it was to administer it, these latter having been wholly ignorant of the Act referred to. And even when the Act was known, the form of Scotch oath could not be found, though each official to whom this duty is entrusted ought to have it at his fingers' ends quite as readily as the English form. Again, the Attorney-General must be perfectly aware that with very few exceptions the average witness knows no more about the Scotch oath and the fifth section of the Oaths Act, 1888, than he does of the man in the moon. the Act being to him as veritable a dead letter as if it had never been passed. Nothing but its total abolition can change the ordinary form of English oath, and we trust that a Bill for this purpose will be introduced very soon after the reassembling of Parliament. If it is not, we trust that Sir Walter Foster will repeat his question and be warmly supported by other members.

STREET RUFFIANISM.

IN spite of the general prevalence of education and of orderly habits we have not yet got rid of the juvenile ruffian. The youth of seventeen who was convicted of manslaughter last Monday for having shot a child in a street fight was an example of this class. Not only so, but he was a member of a gang most of whom carried revolvers and employed their leisure in street fighting. Under the circumstances it is, indeed, remarkable that life has not been taken long ago by these young scoundrels. It is at least equally remarkable that such revivals of savagery as this have existed and even thriven in our midst in spite of all the machinery of law and order. It is easy enough to account for the origin of this unmanly and unboyish barbarism. We have only to allow the passionate hot-headedness of youth to run unchecked and untrained in the channels of idleness in order to witness the effects of its misguidance. There is much, moreover, in city life which induces temptation and fosters evil. We must look for correctives to the steadying influence of school and of work, to sound home training at the hands of the parents, to the healthy regulation of amusement—forces which, though as yet inadequate, are already active. While accepting all these aids, however, and admitting their remedial value, we must allow that a present and more rapid means of relief is indispensable. Riot on a large scale is promptly repressed. Why, then, should not the same course be followed with its lesser developments? Had the practice of gang fighting been put down in Clerkenwell at its outset we should not now have to remember the fatal encounter which occurred a week since. It is to be hoped that after this boy riots will be treated with summary and exemplary severity and with a primary view to their prevention. Corporal punishment should not be omitted whatever the qualms of the modern conscience in regard to it. An important step, in our opinion, would be to make the bearing of pistols or other arms by boys under a given age a criminal offence.

CHOLECYSTITIS IN TYPHOID FEVER.

As a rare complication of typhoid fever cholecystitis has long been observed; but the number of recorded cases is still very small (about forty), and it is only during the last few years that our knowledge of the subject has developed. Dr. Lawrence Mason has recently published a valuable article on the subject.[1] The pathological changes are variable, the gall-bladder may contain serous fluid, pus, or membranous exudation; ulcers often multiple, may form and cause perforation; abscess may occur in the coats. The inflammation is the result of infection of the gall-bladder by the typhoid bacillus, which was first proved by Gilbert and Girode.[2] Subsequently Chiari reported to the eleventh International Medical Congress the results of necropsies on 22 cases of typhoid fever. In 3 only were typhoid bacilli absent from the gall-bladder; in 15 they were present apart from other microbes and the number was often great. Cholecystitis had occurred in 13. He concludes that the occurrence of bacilli in the gall-bladder is the rule in typhoid fever. This inference seems to us scarcely justifiable; the condition of the gall-bladder in fatal cases cannot be fairly taken to represent that in all. *A priori* we should expect, if the extent of infection of the organism is variable, as it appears to be, a more widespread infection in fatal than in non-fatal cases. However, liberally discounting his inference, his facts seem to show that cholecystitis in typhoid fever is not the rare event indicated by the number of recorded cases. Gall-stones are distinctly a predisposing cause. They have been found in about one-fourth of the necropsies. Conversely, there is some evidence that typhoid infection may cause their formation. Dr. Dufourt of Vichy found that 19 patients had their first attack of colic after severe typhoid fever. It occurred after the fever as follows: in the second month in 2 cases, in the third in 6, in the fourth in 3, in the fifth in 1, and in the tenth or later in the remainder. Whether the bacilli cause a chemical precipitate or act as nuclei themselves, or whether stagnation of the bile as the result of the fever is the cause of the production is unknown. Typhoid cholecystitis often produces no noticeable symptoms. The general condition of the patient often prevents any complaint. In more than half the recorded cases nothing unusual was observed. On the other hand, a characteristic picture may be presented—pain in the region of the gall-bladder and under the angle of the scapula and a very tender swelling in the former situation, dull and giving doubtful fluctuation and sometimes visible. Perforation gives rise to symptoms of general or local peritonitis. The prognosis is unfavourable if there is much distension. The treatment consists in relieving the pain by opium, tapping the gall-bladder if necessary, and the performance of laparotomy if perforation has occurred. Dr. Mason describes a case of his own so far unique. A woman towards the end of the third week of typhoid fever complained of increasing abdominal pain in the right hypochondrium, where a tumour four inches in diameter developed, extending from the costal border towards the umbilicus, and causing a visible, very tender swelling. She became partially collapsed, and rupture

[1] Boston Medical and Surgical Journal, May 13th, 1897.
[2] La Semaine Medicale, 1890, No. 58.

seemed imminent. Aspiration was performed one inch below the ribs, and four and a half inches from the umbilicus. Three and a half ounces of sero-purulent fluid were withdrawn. Relief of pain was immediate, and recovery followed. The typhoid bacillus was cultivated from the fluid removed. We published some time ago a case, in which laparatomy was successfully performed for typhoid perforation of the gall-bladder.[3] A woman, aged thirty-one years, on the eleventh day of an attack of typhoid fever had severe pain in the upper part of the abdomen, with semi-collapse, thought to be due to perforation. She recovered, and became convalescent. At the end of the sixth week, another sudden accession of pain and tenderness in the right hypochondrium occurred, where a dull tumour, the size of an orange, appeared. Again intestinal perforation was diagnosed, and the condition regarded as nearly hopeless. Next day her general condition was better, but the abdominal symptoms were worse, there being increased tympanites and immobility of the abdominal wall. Laparotomy showed turbid fluid in the right hypochondrium, but no intestinal perforation. The gall-bladder was deeply inflamed, of a dark plum colour, thickened, adherent, and distended. Near the neck was an ulcer of the size of a threepenny-piece, of typhoid appearance, and with a small perforation through which oozed the contents. The gall-bladder was opened and emptied of an ounce and a half of thick offensive pus. It was found impossible to unite the edges of the ulcer by Lembert's method. The edges of the incision in the fundus were, therefore, attached to the parietal peritoneum and drainage provided for. Recovery followed.

COLLECTIVE INVESTIGATION OF THE ANTITOXIN TREATMENT.

OUR New York correspondent writes:—The American Pædiatric Society's report on the collective investigation of the antitoxin treatment of laryngeal diphtheria in private practice for 1896-97 was submitted to the society at its late meeting at Washington. In this second and supplementary investigation the aim has been to ascertain—(1) what percentage of cases of laryngeal diphtheria recover without operation under antitoxin treatment; and (2) what percentage of cases operated on recover. The report now submitted may properly be limited to answering these two inquiries. Sixty thousand circulars were distributed throughout the United States and Canada. The whole number of cases in this report are 1704, with a mortality of 21·12 per cent. (360 deaths). The following were the operations employed: (*a*) Intubation in 637 cases; mortality, 26·05 per cent. (166 deaths); (*b*) tracheotomy in twenty cases; mortality, 45 per cent. (9 deaths); and (*c*) intubation and tracheotomy in 11 cases; mortality, 63·63 per cent. (7 deaths). Non-operation cases, 1036, 60·79 per cent. of all cases; mortality, 17·18 per cent. (178 deaths). Operation cases, 668, or 39·21 per cent. of all cases; mortality, 27·24 per cent. (182 deaths). Two facts may be recalled in connexion with this paragraph. First, that before the use of antitoxin it was estimated that 90 per cent. of cases of laryngeal diphtheria required operation, whereas now, with the use of antitoxin, 39·21 per cent. require it. Secondly, that the percentage of figures has been reversed, formerly 27 per cent. approximately representing the recoveries, while now, under antitoxin treatment, 27 represents the mortality. To put it in other words, before the use of antitoxin 27 per cent. recovered; now 73 per cent. recover, and this in the severest type of diphtheria. The present report will strike many as revealing a mortality a little too large in each of the two classes. The mortality is large—larger than the personal experience in private practice of many would expect. The reasons for this are—(1) that antitoxin is still used too late, either from procrastination on the part of the physician or objection on the part of the friends; or (2) in a half-hearted way, which shows itself in doses from one-tenth to one-fourth as large as they should be. In truth, both the physicians and the friends of the patient are timid. This report, it must be admitted, shows too large a mortality. In the opinion of the committee it is a larger mortality than will ever be shown again. Antitoxin is gradually being used earlier in the disease, and it will soon be used in sufficient doses. To the society the committee desires to say that it has sought to carry out its wishes in putting antitoxin on trial, and to accept no testimony that did not bear the stamp of reliability; that it has employed the methods approved in the case of the first investigation and report; and that it has confined its work to definitely answering the main questions which the society and profession now have in mind. Points that were settled in the first report, and have since been corroborated by general medical literature, are not again taken up. The committee states that the three most valuable points established in this eleven months' work are—(1) the mortality of laryngeal diphtheria at present rests at 21·12 per cent.; (2) that 60 per cent. approximately have not required intubation; and (3) that the mortality of cases operated on is at present 27·24 per cent.

[3] Mr. Monier-Williams and Mr. Marmaduke Sheild, THE LANCET, March 2nd, 1895, p. 534.

PILGRIMS AND QUARANTINE.

THREE weeks ago the great festival at Mecca took place; the faithful assembled in their thousands and the usual sacrifice of animals was made. The health of the immense concourse of pilgrims was officially declared to be perfectly good, and searching telegrams from Egypt could not discover any unusual amount of diarrhœa or dysentery among the worshippers. But "pilgrim diarrhœa" has become an annual factor which has never yet been dealt with, and there are some who suspect that cholera for the last few years has been endemic in the holy places and presumably in the holiest of all, Mecca, with its well-known water from the Zem-Zem well. This is only conjecture, for no reliable clinical evidence, and absolutely no bacteriological or pathological information, ever reaches us from the Haj. It is idle to expect Turkey to initiate any reform, but is it not time for Europe to insist upon this pilgrimage being conducted on cleanly and decent lines? India possesses many trained Mussulman physicians, and though her bacteriology is as yet in its infancy she might have done much in all these years past to control her share of the pilgrimage. Cairo, Constantinople, and Algiers all boast of Mohammedan bacteriologists, and there is no reason why one of them should not be sent both to Mecca and Jeddah to work before and during the next pilgrim season. The Great Powers up to the present have treated this annual Haj with Oriental apathy, and have contented themselves with wrangling over theoretical questions at occasional congresses.

SPECIAL INSTRUCTION FOR FEEBLE-MINDED CHILDREN UNDER THE POOR-LAW.

THE Departmental Committee of the Local Government Board in their report on the London district schools pointed out that feeble-minded children are necessarily admitted to the Poor-law schools, and evidence was brought forward showing that about 1 per cent. of children of school age are so far subnormal in physical and mental power as to require special training. A recent order of the Local Government Board places these children for the future under the care of the Sick Asylums Board for the metropolitan area, and that public body will apparently have to provide for their care and education. An objection has been raised that by such a

transfer these children will be removed from their fellows and placed under a board whose only educational work is in the care of children of unsound mind. It is thought that the arrangements may resemble too much those of an asylum. The managers of the Kensington and Chelsea schools at Banstead wish to make provision for the feeble-minded children under their care, and propose to allot a "special class-room," where a dozen such children, who have been selected with care, may receive special instruction. After some delay the Local Government Board has sanctioned the appointment of a teacher to take educational charge of these children. It is not proposed to separate the children, who will reside in the cottage homes, but to arrange that as now in domestic life, sleeping, and meals, they may join in with the others as much as possible. In school time they will go to the "special class," where they will receive a modified form of Kindergarten training and appropriate physical exercises. The experiment is inexpensive and well worth trying. We hope it may succeed.

RECURRENT MEASLES.

IT is, we suppose, admitted that in none of the infective diseases does one attack confer absolute immunity from a second; but apart from small-pox there are but few available data for estimating the comparative frequency with which such second attacks occur. Dr. Pole Kitson, of Cleobury Mortimer, Salop, reports that in a recent outbreak of measles in his district several examples of this somewhat unusual character took place. In particular he cites one in which several members of one family were attacked with measles in March and again in May or the end of April. He gives details of one of these patients whom he first saw on March 3rd with well-marked eruption and catarrhal symptoms. Recovery followed in a fortnight, but on May 4th Dr. Kitson was again summoned to attend him for an illness in which all the previous symptoms were repeated. Such a case can hardly be regarded as a "relapse," and if the later illness were indeed measles it points to a very brief immunity from infection, and it is not a little remarkable that other members of the same family should also have been again infected. We have assumed that the diagnosis was accurate, for in all such cases, as remarked by a recent writer, there is a possibility of "the first or the second eruption being in reality that of 'German measles.'" To adopt such an explanation, however, in the present instance, in view of the fact that measles was prevalent in the district, would be begging the question; and it would be preferable to admit that under certain conditions the protection afforded by a single attack does not always secure the individual against further infection.

THE Drapers' Company with great munificence have offered to erect a new building for the accommodation of the Radcliffe Library at Oxford, at a cost of £15,000, from plans to be submitted by Mr. T. G. Jackson, R.A., for the approval of the University authorities.

THE death of Professor Charteris, of Glasgow University, is announced. He had been in indifferent health since the end of March, and had not conducted his class during the current summer session.

H.R.H. THE PRINCE OF WALES will open the Brook Fever Hospital, erected by the Metropolitan Asylums Board at Hither-green. The date of the ceremony has not yet been fixed.

The Lancet Special Commission

ON

SICILY

AS A HEALTH RESORT.

II.[1]

The Factors which determine Climate.—Characteristics of the Mediterranean Climate.—Prevailing Winds in Sicily.—The Sirocco.—The Sicilian Climate essentially Insular.—Meteorological Returns of (1) Palermo, (2) Catania, (3) Syracuse, (4) Girgenti, (5) Termini, (6) Taormina.—Sketch of a Year's Weather at Palermo.

THE last article contained a short sketch of the features of the Sicilian climate in general. The present article will be devoted to a more detailed consideration of the same subject, and to the special meteorological characteristics of the different localities—Palermo, Catania, Syracuse, Girgenti, Termini, and Taormina.

The factors which determine climate are the following:—(1) Latitude; (2) elevation above the sea level; (3) prevailing winds; (4) ocean currents; (5) conditions of local shelter or exposure; (6) proximity of warm or cold seas, deserts, snowfields, &c.; and (7) geological formation and conditions of soil.

Sicily lies between 36° 38′ and 38° 19′ of north latitude. Cape Passaro, the extreme southern point of the island, is farther south than Algiers or Tunis, a fact that may serve to emphasise the point that the climatological relations of Sicily with the African continent are intimate and important. As has already been observed, a strait of shallow water, about eighty miles wide, separates Sicily on the west from Tunisia. Lying in the centre of the Mediterranean, Sicily possesses the typical Mediterranean climate, of which the leading features are warmth, mildness, brightness, moderate humidity, a high proportion of fine weather, and comparative immunity from mist, fog, sharp winds, and winter cold. The prevailing winds from October to March are from the west-south-west, hence an equatorial marine current which brings rain. From May to September north-easterly polar currents prevail, and for many consecutive weeks the weather is practically rainless. At the season of the equinoxes there is a conflict between the equatorial currents and the polar currents, with windy and unsettled weather. The sirocco, a south-easterly wind from the southern deserts, blows at all seasons, but it is rare in winter, and at this season its disagreeable features are insignificant. It is comparatively common at the turn of the season in April and May, and again in September and October, while it also occurs, though more rarely, during the summer months. The sirocco is a hot, dry wind, obscuring the sky and bringing clouds of dust. During its prevalence the thermometer sometimes rises to from 100° to 105° F. (= 37·8° to 40·6° C.) in the shade, but this is rare. It lasts one, two, or at most three days, and is usually followed by refreshing rains. Its enervating effects are more felt by the healthy than by the ailing, and some invalids (especially some *poitrinaires*) feel unusually well during the prevalence of the sirocco. Though disagreeable it is not an unhealthy wind, and it does not aggravate existing disease or raise the general rate of mortality.

It would not appear that marine currents exercise any considerable influence upon the climate of Sicily. Conditions of local shelter or exposure have important bearings upon the special features of some of the Sicilian resorts. Palermo owes some of the special characteristics of its climate to its ring of enclosing mountains. Catania is affected by the proximity of the Etna snowfields. Girgenti faces Tunisia and feels more fully than other parts of the island the influence of the African continent.

The influence of the encircling Mediterranean is a dominant factor in determining the character of the Sicilian climate. The Mediterranean is an expanse of comparatively warm water, and as Dr. Marcet has shown, the temperature of

[1] No. I. was published in THE LANCET of June 5th, 1897.

the surface of the sea has a mean excess in places of about 12° F. (=6·6° C.) over the minimum temperature of the air. Sicily is thus laved on all sides at all seasons by a warm sea, which retains its summer heat until at least the end of November. Occasion will hereafter be taken to compare and contrast the climate of Sicily with that of the Riviera. It is sufficient to remark here that while the climate of the Riviera owes its characteristics partly to the influence of the Mediterranean and partly to that of continental Europe, Sicily owes its climatic peculiarities predominantly to the influence of the Mediterranean and in a minor degree to the influence of the African continent. It does not feel the influence of continental Europe to any appreciable degree. From Sicily to Cape Bon in Tunisia is a distance of less than 140 kilometres, while from Sicily to Genoa is a distance of 780 kilometres. Thus, much is heard in Sicily of the sirocco, but nothing of the mistral or the bise. Hence the rainless summer of Sicily, the absence of frost, snow, and winter cold, the rarity of cold, the rarity of cold winds from any quarter, the high average of fine weather, the marked equability of temperature. The Etna snowfields exercise some slight effect upon local meteorological conditions at Catania, Aci Reale, and Taormina. Otherwise their influence is unimportant. The geological conditions in Sicily are on the whole favourable in their influence upon climate. The surface of the country is in large part composed of tertiary limestone. Alluvial soil and marshy lands occur, but are not widely distributed.

The meteorological characteristics of the various localities will now be considered more in detail.

1.—PALERMO.

Palermo lies on the west side of the Bay of Palermo, and is surrounded by a rich plain, the fertile Conca d'Oro or Golden Shell, which is enclosed by an amphitheatre of lofty mountains, the highest summit, Monte Cuccio, attaining an altitude of 3445 ft. The town is protected on the north by the imposing mass of Monte Pellegrino, but is exposed on the north-east. Palermo owes the special features of its climate—viz., its mildness, equability, and comparatively large rainfall—in considerable degree to the influence of the encircling mountains, which intercept the moisture-laden winds from the south-west and west-south-west and cause a considerable precipitation of rain upon the "agro palermitano," or Conca d'Oro. The mean annual temperature of Palermo is 18·15° C. (= 64·6° F.), while that of Catania is 18° C. (= 64·4° F.), of Syracuse 17·4° C. (= 63·3° F.), and of Girgenti 17·9° C. (= 64·2° F.). These are the official figures. Assuming their correctness it would appear that Palermo, in spite of its geographical situation, has a higher mean annual temperature than the other chief localities in the island. It owes this peculiarity, probably, to the conditions of local shelter already referred to. Palermo has an average daily variation of only 6·7° C. (= 12·8° F.), as against 7·7° C. (= 13·8° F.) for Catania. It is warmer in winter and cooler in summer than Catania, and its climate may be regarded as one of the most equable in Sicily. The mean temperature of the months of the year at Palermo is as follows :—

	Degrees.		Degrees.
January,	10·89 C. = 51·60 F.	July,	26·03 C. = 78·85 F.
February,	11·61 C. = 52·90 F.	August,	26·16 C. = 79·09 F.
March,	13·34 C. = 56·01 F.	September,	23·93 C. = 75·07 F.
April,	15·56 C. = 60·01 F.	October,	20·31 C. = 68·56 F.
May,	18·89 C. = 66·00 F.	November,	15·88 C. = 60·58 F.
June,	22·67 C. = 72·81 F.	December,	12·53 C. = 54·55 F.

The mean average temperature of the invalid season—Nov. 1st to April 30th—is 13·30° C. at Palermo, which is almost equivalent to 56° F. This figure may be contrasted with the mean temperature at London during the same period, which is 41·6° F. (=5·4° C.), and at Cannes—viz., 50·1° F. (=100° C.). The absence of winter cold is brought out clearly by the returns of the Palermo Meteorological Observatory. In the decennial period 1880–89 there were only two years—viz., 1882 and 1883—in which the thermometer touched freezing point on the terrace of the Observatory. In the other years the minimum temperature registered varied from about 32·5° F. to 37° F. (= 0° C. to nearly 3° C.). The mean temperature of the coldest month at Palermo, January—viz., 10·89° C. (= 51·6° F.)—may be compared with the mean temperature of the same month at Ventnor—viz., 41·6° F. (=5·3° C.); at Cannes—viz., 49·6° F. (=9·8° C.); and at Cairo—viz., 53·6° F. (=12·0° C.).

The mean relative humidity of the air at Palermo is 65·4 per cent. (saturation = 100 per cent.). The humidity of the air is greatest in November (69·3 per cent.), December (70·7 per cent.), and January (69·9 per cent.); least in June (63·4 per cent.), July (60·2 per cent.), and August (59·7 per cent.). As pointed out in the first article of this series these figures indicate a moderate, not a high, degree of humidity. The proportion of fine, sunny days on the one hand, and of cloudy or rainy days on the other, is a matter of the first importance in connexion with any health resort. The following are the average annual figures for Palermo :—

1. "Giorni sereni"—i.e., days of cloudless sunshine	167	= 229 fine days per annum.
2. "Giorni misti"—i.e., days of combined cloud and sunshine	62	
3. "Giorni coperti"—i.e., cloudy days	136	
4. "Giorni piovosi"—i.e., days with some rain	116	
5. "Giorni ventosi"—i.e., windy days	33	

The average annual rainfall is 758·68 mm. (=29·87 in.) and the average precipitation per month is as follows :—

	Millimetres.		Millimetres.		Millimetres.
January,	118·20	May,	33·55	September,	42·16
February,	74·86	June,	12·57	October,	100·05
March,	72·05	July,	5·96	November,	102·70
April,	66·96	August,	13·13	December,	117·49

It will be thus seen that Palermo has a considerable rainfall (758·68 mm. = 29·87 in.), and that the fall is chiefly in the winter months.

The following may serve as a slight sketch of the usual climatic conditions throughout the year at Palermo. Summer sets in towards the end of May and lasts until September. This is the dry season, and the rainfall is very small. It is not uncommon for an entire month to pass without any collectable rainfall. The mean temperature varies from 19° to 26° C. (= 66·2 to 78·8 F.), and with the exception of an occasional day of sirocco, when the maximum temperature may exceed 100° F., (=37·8° C.) high temperatures are rare. There is great power of sun-heat from 11 A.M., to 5 P.M., but the mornings, evenings, and night are moderately cool. The sky is for the most part cloudless, the atmosphere is calm except when the sirocco is blowing, and the prevailing wind is N.E., with occasional variations to W.S.W. The settled summer weather begins to break in September. The wind changes frequently and is sometimes boisterous. The sirocco becomes more frequent, and the amount of cloud and of rain increases. The weather is often close and relaxing, and on the whole September is perhaps the least pleasant month of the year. In October the winds settle to W.S.W., from which quarter they continue to blow until April, with occasional changes to N.N.E. and S.E. The temperature falls and rain becomes more frequent. November presents a similar condition of things, with a further fall of temperature and a slight increase of rainfall. St. Martin's summer ("l'estate di San Martino") is sometimes well marked. December and January have a considerable rainfall and a somewhat high proportion of cloudy days. There is little real cold, the thermometer only very exceptionally touching freezing point, and the amount of snow being confined to a slight shower four or five times in the season. A slight film of ice occasionally forms on standing water, but this is rare. February and March often bring fine, bright, settled weather, with a very agreeable temperature and a large proportion of charming days. At this season the weather in Sicily generally is often much the best in Europe. There are no cold winds comparable to the mistral or the bise, though the north-east wind or greco may be felt rather sharply at times by the more delicate invalids. April marks the transition season, and the weather is somewhat less settled. Sirocco days become more frequent. The weather is, however, often charming in the highest degree, the air is delightfully soft and balmy, there is no unpleasant heat or treacherous cold, and the aspect of the country, with its waving corn crops, luxuriant orange groves, and innumerable multitude of wild flowers, is truly "incantevole" (enchanting)—to use the favourite term of the Sicilian meteorologists. In May the temperature rises steadily, rainy days become rare, the winds settle in the north-east, and by the end of the month the cloudless, rainless, Sicilian summer has fairly commenced.

2.—CATANIA.

Having dealt fully with the climatic conditions of Palermo those of the other chief localities of the island may be more briefly considered. The mean annual temperature of

Catania is 18° C. (= 64·4° F.). The mean temperature of the various months is as follows :—

	Degrees.		Degrees.
January,	9·73 C. = 49·51 F.	July,	26·65 C. = 79·97 F.
February,	10·93 C. = 51·67 F.	August,	25·28 C. = 79·30 F.
March,	12·51 C. = 54·52 F.	September,	24·61 C. = 76·30 F.
April,	14·84 C. = 58·71 F.	October,	20·81 C. = 69·46 F.
May,	18·35 C. = 65·03 F.	November,	16·14 C. = 61·05 F.
June,	23·02 C. = 73·44 F.	December,	12·09 C. = 53·76 F.

The mean temperature of the different seasons is as follows :—

	Degrees.		Degrees.
Winter...	10·88 C. = 51·58 F.	Summer...	25·31 C. = 77·56 F.
Spring...	15·26 C. = 59·47 F.	Autumn...	20·53 C. = 68·95 F.

The mean daily range of temperature is 7·7° C. (= 13·8° F.). The range is greatest in summer, least in November and December. The mean relative humidity is 61·0 (saturation = 100). The average annual rainfall is 542·7 mm. (= 21·32 in.). The average amount of daily sunshine is 0·62 per cent. The following is the average state of the weather :—

"Giorni sereni" (days of cloudless sunshine) ...	164	= 282 fine days per annum.
"Giorni misti" (days of combined cloud and sunshine)	118	
"Giorni coperti" (cloudy days)	83	
"Giorni piovosi" (days with rain)	86	

Snow falls on an average one day in the year, frost occurs once or twice a year, hail falls on from 3 to 4 days, and storms occur on about 8 or 9 days. Cold winds from the Etna snowfields are not frequent or troublesome, but dust from the lava is sometimes a source of annoyance.

A comparison of these figures with those of Palermo shows some interesting points of contrast. The climate of Catania is drier and brighter than that of Palermo, the rainfall is one-third less, the relative humidity is less by 4·4 per cent., the proportion of days of cloudless sunshine is about the same as Palermo, but the "giorni misti" are more numerous by 56, the mean daily range of temperature is greater by 1° C., and the difference between the hottest and the coldest month is more marked. It would thus appear that Catania has a less equable climate than Palermo, but that it has a decided superiority in the proportion of fine weather and in the lower humidity and smaller rainfall. It is probable that the proximity of Mount Etna is a chief factor in the explanation of these peculiarities.

3.—SYRACUSE.

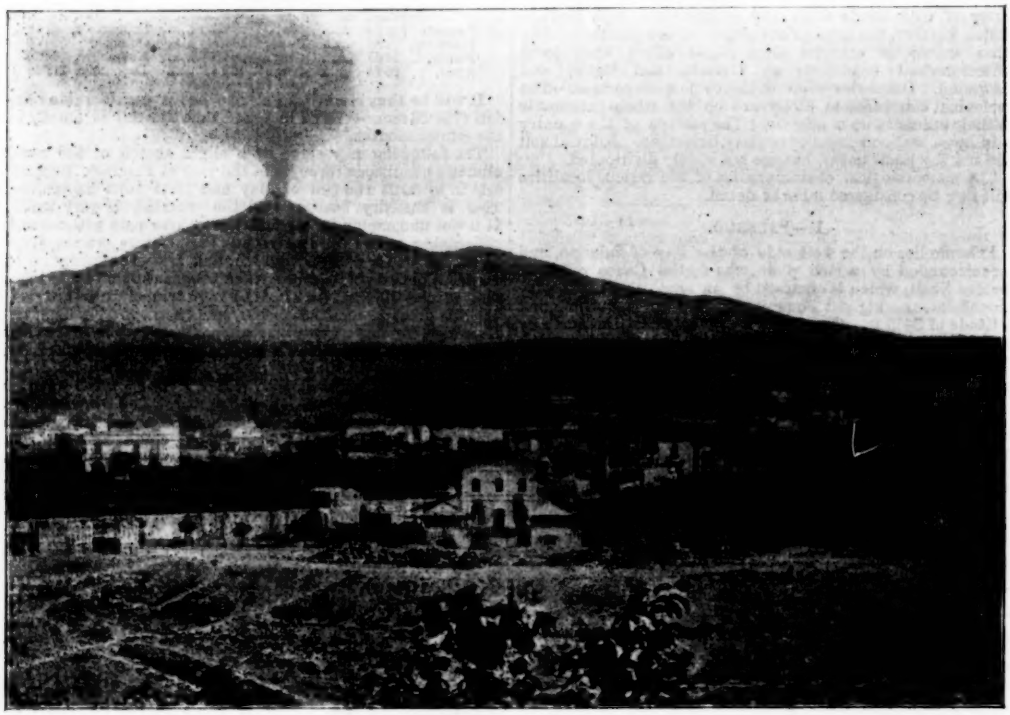
The following figures refer to the year 1896 unless otherwise stated. The mean temperature for the year was 17·4° C. (= 63·3 F.). The mean temperature for the various months was as follows :—

	Degrees.		Degrees.
January,	9·8 C. = 49·6 F.	July,	26·1 C. = 79·0 F.
February,	10·2 C. = 50·3 F.	August,	25·5 C. = 77·9 F.
March,	12·9 C. = 55·2 F.	September,	23·8 C. = 74·9 F.
April,	*12·5 C. = 54·5 F.	October,	20·2 C. = 68·4 F.
May,	16·8 C. = 62·2 F.	November,	16·5 C. = 61·7 F.
June,	22·1 C. = 71·8 F.	December,	12·6 C. = 54·7 F.

* This is the official figure. It is probably a slip for 14·5.

The lowest temperature recorded was 2·9° C. (= 37·2° F.), which occurred in the month of January. The mean relative humidity was 70. The number of days with rain was 85. The number of windy days was 109. The average rainfall (1874–1896) was 570·8 mm. = 22·7 in. The number of "giorni sereni" and "giorni misti" is not stated, but the proportion is probably high.

The above returns being for the most part for one year have but a limited value. The general characters of the climate of Syracuse are, however, clear. It has a fine, bright, somewhat windy climate, with little or no winter cold, frost, or snow. The windiness is its great drawback, and it is a serious defect.



Catania from the gardens of the Villa Bellini: Mount Etna in the distance.

4.—GIRGENTI.

The mean annual temperature is 17·9° C. (= 64·2° F.). The mean temperature of the coldest month (January) is 9·0° C. (= 48·2° F.); of the hottest month (July), 25·2° C. (= 77·3° F.). The average daily range of temperature is 6·4° C. (= 11·5° F.). The average annual rainfall is 560 mm.

The mean relative humidity is 72 per cent.; the mean maximum temperature is 37·1° C. (= 98·8° F.); the mean minimum temperature is 2·4° C. (= 36·3° F.).

The town of Girgenti is at an elevation of from 255 to 400 metres above the sea level, there is a considerable amount of wind, and the air is on the whole fresh and pure except when the sirocco blows. The rainfall is small, and it will be observed that the rainlessness of the summer season is even more marked at Girgenti than at Palermo, also that the rainless season lasts through September at Girgenti, while at Palermo this month shows quite a considerable rainfall.

5.—TERMINI.

(*On the north coast, twenty-three miles from Palermo.*)

Mean annual temperature (average of twenty years), 18·68° C. (= 65·6° F.); mean minimum temperature, 3·27° C. (= 37·8° F.); mean maximum temperature, 38·15° C. (= 100·7° F.); average annual rainfall, 674·60 mm. = 26·7 in.; average number of days with rain per annum, 85; average number of cloudy days, from 100 to 105.

6.—TAORMINA.

(*About midway between Messina and Catania.*)

An inspection of the meteorological records kept at the Semaphore station of Taormina proved them to be of considerable interest, but unfortunately they were not in a form admitting of any proper comparison with the returns from the other stations. It would appear, however, that Taormina enjoys a remarkably rainless, bright, and, on the whole, equable winter climate. The temperature at midday at the coldest season is rarely under 10° C. (= 50° F.). The number of rainy days is very low, not more than twenty in the course of the whole winter, according to the officer in charge of the Semaphore station. As observations have only been made for two seasons this figure cannot, of course, be taken as the correct average, but it may fairly be allowed some weight. Snow hardly ever falls. There is much wind, and the north-east wind (greco) is sometimes rather cold. Cold winds from the Etna snowfields are not frequent. The sirocco blows about three or four times per month in the winter season and brings much cloud with it.

Meteorological returns from many other parts of Sicily were available, but probably the above six localities are sufficient to give a general idea of the climate. It will be observed that two of these places are on the north coast—viz., Palermo and Termini; three on the south coast—viz, Syracuse, Catania, and Taormina; and one on the west coast—viz., Girgenti. The materials do not exist for any exact classification of the various types of climate to be found in Sicily, nor is it possible to contrast in any satisfactory way the climates of the coast with those of the higher mountains—e.g., Etna or the Madonian mountains. This must be reserved for the future. For the present it is sufficient to have given the returns from six of the chief stations in the island, noting the broad features of the Sicilian climate and some of the more obvious differences between the meteorology of the six places in question. It is evident that the climate is one of remarkable warmth, mildness, and equability, that winter cold (in the sense in which the inhabitant of northern or western Europe understands the term) is practically unknown, that the proportion of bright sunny days is very high, that the humidity of the air is moderate, that the rainfall varies considerably, but is generally moderate, that cold winds are rare, and that, with the exception of the sirocco, the climate has no grave drawback. Palermo has a larger rainfall and a higher proportion of wet and cloudy days than Girgenti, Catania, Taormina, or Syracuse. On the other hand, the equability of its climate is more marked than that of the other places in question. Catania excels in warmth, brightness, and large proportion of fine days, but is somewhat less equable. Syracuse has a bright climate with a small rainfall, but it is one of the windiest places in Sicily.

In the next article the above meteorological details will be contrasted with those furnished by some of the chief home and foreign sanatoria, and their importance from the point of view of medical climatology will be considered.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE annual general meeting of this institution was held on the 28th ult., the treasurer, Dr. HOLMAN, being in the chair.

After the election of three pensioners, six foundation scholars, and one Morgan annuitant (the results of which are announced below), the SECRETARY read the report of the Council to the Governors, which was satisfactory in every respect. In this reference was made to an occurrence which was not unprecedented and was likely to happen again—viz., a foundation scholar of marked ability obtained in open examination a scholarship at Cambridge, but could not, from want of means, avail himself of that opportunity of making his way in the world.

In commenting on this "too early souring of a life" the CHAIRMAN laid great stress upon the fact that it was not necessary to capitalise a large sum of money in order to meet such cases, because a sum of, say, £400 or £500 would enable the Council to assist deserving necessitous foundationers for some years; and he read a letter from a general practitioner, who did not wish his name to be made known, offering a cheque for £50 for the purpose in view if nine others would contribute the same amount by a certain date.

The CHAIRMAN stated that the new building for the junior or lower school, capable of accommodating 100 boys, was opened in May, and that the new chancel in the College chapel, designed by Sir A. W. Blomfield and Sons, had increased the accommodation by 120 sittings. The altar was the gift of Mr. John F. France, who had within the last few years so munificiently placed at the disposal of the Council nine free scholarships for girls at the Royal Asylum of St. Anne's Society. During the past twelve months six open university honours in classics, mathematics, or natural science had been won by pupils of the college at Oxford or Cambridge, which was a good result for a school of 250 boys, and should lead to the education given at the college being recognised by the parents of other boys than those being prepared for the medical profession.

The annual report having been duly approved, Dr. Ralph Gooding was elected a vice-president of the college, in consideration of his having collected £1000 as honorary local secretary; after which the usual formal business was transacted. The proceedings were brought to a close by a vote of thanks to the chairman, proposed by Sir Joseph Fayrer, and seconded by Dr. Hare.

The following were the successful candidates at the election:—

PENSIONERS.

	Votes.		Votes.
Broster, Alfred	4296	Daniel, Benjamin...	2469
Wordsworth, Mary A. ...	2720		

FOUNDATION SCHOLARS.

McCallum, William S. ...	6613	Milner, Chas. E. H.	5668
Seccombe, Charles E	6523	Davies, Stanley W.	5634
Palmer, Ronald C.	6016	Silverlock, Richard G. ...	5647

MORGAN ANNUITANT.

Heeley, Margaret M. 8523

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6581 births and 3661 deaths were registered during the week ending June 5th. The annual rate of mortality in these towns, which had been 17·2 and 16·6 per 1000 in the two preceding weeks, rose again last week to 17·4. In London the rate was 15·4 per 1000, while it averaged 18·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·0 in Brighton, 13·1 in Derby and in Birkenhead, 13·4 in Portsmouth, and 13·7 in Norwich; the highest rates were 23·3 in Sheffield, 23·4 in Halifax, 24·9 in Bolton, and 27·1 in Salford. The 3661 deaths in these towns included 364 which were referred to the principal zymotic diseases, against 357 and 355 in the two preceding weeks; of these, 121 resulted from measles, 95 from whooping-cough, 56 from diphtheria, 34 from diarrhœa, 32 from scarlet fever, and 26 from "fever" (principally enteric). No fatal case of any of these diseases was recorded last week either in Swansea or in Derby; in the other towns they caused the lowest death-rates in Croydon, Nottingham, Norwich, and Halifax, and the highest rates in Birkenhead, Burnley, Bolton, and Salford. The greatest mortality from measle occurred in Birmingham, Liverpool, Bolton, Manchester, Salford, and Burnley; and from whooping-cough in Plymouth, Bolton, Manchester, Oldham, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess

in any of the large towns. The 56 deaths from diphtheria included 33 in London, 3 in Birmingham, and 3 in Burnley. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 4 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 5th, against 14, 13, and 12 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2601, against numbers increasing from 2380 to 2546 on the five preceding Saturdays; 274 new cases were admitted during the week, against 239, 311, and 278 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 220 and 196 in the two preceding weeks, rose again to 229 last week, but were 49 below the corrected average. The causes of 44, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Hull, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·3 and 21·7 per 1000 in the two preceding weeks, further declined to 20·3 during the week ending June 5th, but exceeded by 3·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·9 in Aberdeen and 17·9 in Dundee to 29·0 in Leith and 37·5 in Perth. The 605 deaths in these towns included 40 which were referred to whooping-cough, 30 to measles, 18 to diarrhœa, 3 to "fever," 2 to scarlet fever, and not one either to small-pox or diphtheria. In all, 93 deaths resulted from these principal zymotic diseases, against 110 and 91 in the two preceding weeks. These 93 deaths were equal to an annual rate of 3·1 per 1000, which was 1·4 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 35 and 34 in the two preceding weeks, rose again last week to 40, and included 21 in Glasgow and 14 in Edinburgh. The deaths referred to measles, which had been 49 and 24 in the two preceding weeks rose again last week to 30, of which 15 occurred in Edinburgh, 7 in Leith, and 6 in Glasgow. The 3 deaths referred to different forms of "fever" were within one of the number recorded in the preceding week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 135 and 128 in the two preceding weeks, further declined to 110 last week, but exceeded by 13 the number in the corresponding week of last year. The causes of 45, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·3 and 28·3 per 1000, in the two preceding weeks, declined again to 25·2 during the week ending June 5th. During the past nine weeks of the current quarter the death-rate in the city has averaged 30·1 per 1000, the rate during the same period being 16·1 in London and 26·3 in Edinburgh. The 169 deaths registered in Dublin during the week under notice showed a decline of 21 from the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 15 in each of the two preceding weeks; of these, 3 resulted from measles, 3 from whooping-cough, 2 from scarlet fever, 2 from diarrhœa, and not one either from small-pox, diphtheria, or "fever." These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·4 in London and 5·9 in Edinburgh. The fatal cases of measles, which had been 5 in each of the two preceding weeks, declined to 3 last week. The deaths referred to whooping-cough, which had been 6 and 2 in the two preceding weeks, rose again to 3 last week. The 2 fatal cases of scarlet fever were within one of the number recorded in the preceding week. The 169 deaths in Dublin last week included 29 of infants under one year of age, and 41 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Seven inquest cases and 5 deaths from violence were registered; and 72, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·1 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 8·7, 7·8, and 7·2 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Hampstead, Stoke Newington, St. Martin-in-the-Fields, Strand, and St. Olave Southwark; while they showed the largest excess in Chelsea, St. Giles, Holborn, Mile End Old Town, St. George Southwark, Rotherhithe, and Battersea. Ten cases of small-pox were notified in London during May, against 48, 8, and 11 in the three preceding months; of these, 3 belonged to St. James Westminster, 2 to Marylebone, and 1 each to Islington, Shoreditch, St. Olave Southwark, Battersea, and Wandsworth sanitary areas. There were 12 small-pox patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 43, 17, and 12 at the end of the three preceding months; 9 new cases were admitted during the month, against 8 in each of the two preceding months. The prevalence of scarlet fever in London showed a further increase upon that recorded in recent months; this disease was proportionally most prevalent in Chelsea, St. Giles, Mile End Old Town, St. George Southwark, Newington, Rotherhithe, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 2495 scarlet fever patients at the end of May, against 2775, 2468, and 2330 at the end of the three preceding months; the weekly admissions averaged 258, against 228, 208, and 225 in the three preceding months. The prevalence of diphtheria in London showed a slight increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, Whitechapel, St. George-in-the-East, Mile End Old Town, St. George Southwark, and Bermondsey. There were 783 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 855, 776, and 764 at the end of the three preceding months; the weekly admissions averaged 108, against 101 and 127 in the two preceding months. The prevalence of enteric fever in London showed a slight increase upon that recorded in the preceding month; this disease was proportionally most prevalent in Holborn, Shoreditch, St. George Southwark, and Bermondsey sanitary areas. Erysipelas showed the highest proportional prevalence in St. Giles, St. Luke, Bethnal Green, Limehouse, and St. George Southwark sanitary areas. The 20 cases of puerperal fever notified during May included 3 in St. Pancras, 3 in Hackney, and 3 in Rotherhithe sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 29th, the deaths of 5105 persons belonging to London were registered, equal to an annual rate of 14·9 per 1000, against 18·5, 17·4, and 16·6 in the three preceding months. The lowest death-rates during May in the various sanitary areas were 9·8 in Hampstead, 11·2 in St. George Hanover-square, 11·3 in Fulham and in Lewisham, 11·6 in Lee, 12·2 in Wandsworth, and 12·4 in Paddington and in Islington; the highest rates were 19·2 in Bermondsey and Rotherhithe, 19·9 in St. George-in-the-East, 20·1 in Newington, 20·9 in St. Saviour Southwark, 23·8 in Limehouse, and 25·7 in Holborn. During the four weeks of May 480 deaths were referred to the principal zymotic diseases in London; of these, 142 resulted from whooping-cough, 136 from diphtheria, 82 from measles, 48 from diarrhœa, 45 from scarlet fever, 25 from enteric fever, 1 from an ill-defined form of continued fever, and 1 from

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—MAY, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,463,169	10	1372	849	—	145	2	20	380	1	2779	8·1	1	82	45	136	142	—	25	1	48	480	1·4	5105	14·9	105
West Districts.																										
Paddington	126,161	—	23	30	—	4	—	—	9	1	67	6·9	—	—	3	5	7	—	1	—	1	17	1·8	120	12·4	106
Kensington	171,427	—	45	18	—	8	—	1	10	—	82	6·2	—	1	—	7	—	—	2	—	2	12	0·9	177	13·5	114
Hammersmith	105,959	—	24	10	—	3	—	—	1	—	38	4·7	—	—	—	2	2	—	1	—	1	6	0·7	104	12·8	142
Fulham	120,040	—	35	24	—	4	—	1	9	—	73	7·9	—	—	1	3	7	—	1	—	—	12	1·3	104	11·3	106
Chelsea	96,692	—	47	31	—	2	—	—	5	—	85	11·5	—	—	1	5	5	—	—	—	—	11	1·5	112	15·1	102
St. George Hanover-square	80,330	—	10	9	—	1	—	—	6	—	26	4·2	—	—	1	1	1	—	1	—	—	4	0·6	69	11·2	39
Westminster	53,027	—	12	10	—	2	—	—	8	—	32	7·9	—	—	—	1	—	—	—	—	—	1	0·2	71	17·5	120
St. James Westminster	22,576	3	7	2	—	—	—	1	2	—	15	8·7	—	—	—	—	1	—	—	—	—	1	0·6	30	17·3	57
North Districts.																										
Marylebone	140,808	2	38	6	—	6	1	1	20	—	74	6·9	—	—	1	2	2	—	—	—	1	6	0·6	167	15·5	88
Hampstead	77,275	—	12	11	—	2	—	—	5	—	30	5·1	—	1	—	1	2	—	1	—	—	5	0·8	58	9·8	75
St. Pancras	242,255	—	79	35	—	8	—	3	19	—	144	7·8	—	6	3	4	9	—	2	—	4	28	1·5	313	16·8	110
Islington	341,134	1	107	60	—	14	—	1	22	—	205	7·8	—	—	2	12	6	—	—	—	2	22	0·8	324	12·4	86
Stoke Newington	34,136	—	6	4	—	1	—	1	—	—	12	4·6	—	—	—	4	1	—	—	—	—	5	1·9	36	13·7	47
Hackney	216,698	—	66	56	—	8	—	3	15	—	148	8·9	—	4	2	8	6	—	1	—	4	25	1·5	233	14·0	115
Central Districts.																										
St. Giles	37,840	—	14	7	—	2	—	—	9	—	32	11·0	—	—	2	—	2	—	—	—	—	4	1·4	51	17·6	86
St. Martin-in-the-Fields	12,711	—	3	1	—	1	—	—	—	—	5	5·1	—	—	—	—	—	—	1	—	—	1	1·0	13	13·3	—
Strand	23,552	—	3	1	—	—	—	—	2	—	6	3·3	—	—	—	—	—	—	—	—	—	—	—	33	18·3	111
Holborn	30,493	—	12	7	—	4	—	—	4	—	27	11·5	—	—	—	—	1	—	1	—	1	3	1·3	60	25·7	20
Clerkenwell	66,162	—	19	16	—	1	—	—	5	—	41	8·1	—	1	—	—	6	—	—	—	1	8	1·6	86	16·9	131
St. Luke	41,279	—	12	7	—	1	—	—	12	—	32	10·1	—	—	—	2	3	—	1	—	1	7	2·2	59	18·6	99
City of London	30,228	—	9	2	—	1	—	—	2	—	14	6·0	—	—	—	—	1	—	1	—	—	2	0·9	43	18·5	37
East Districts.																										
Shoreditch	121,883	1	35	14	—	7	—	—	16	—	73	7·8	1	3	1	—	5	—	1	—	3	14	1·5	145	15·5	111
Bethnal Green	129,098	—	32	27	—	2	—	1	26	—	88	8·9	—	12	1	8	2	—	—	—	1	24	2·4	165	16·7	89
Whitechapel	79,724	—	26	26	—	1	—	—	6	—	59	9·6	—	4	1	3	1	—	—	—	—	9	1·5	87	15·9	103
St. George-in-the-East	47,917	—	11	21	—	1	—	—	3	—	36	9·8	—	4	—	2	1	—	—	—	—	7	1·9	73	19·9	103
Limehouse	66,506	—	17	14	—	2	—	—	9	—	42	9·4	—	3	1	1	—	—	—	—	3	8	1·8	107	23·8	146
Mile End Old Town	111,823	—	37	41	—	6	—	—	15	—	99	11·5	—	5	—	5	6	—	1	—	1	18	2·1	128	14·9	89
Poplar	169,811	—	49	44	—	6	1	1	22	—	123	9·4	—	5	—	10	2	—	1	—	3	21	1·6	217	16·7	123
South Districts.																										
St. Saviour Southwark	24,919	—	5	5	—	—	—	—	—	—	10	5·2	—	—	—	1	—	—	—	—	—	1	0·5	40	20·9	94
St. George Southwark	60,388	—	46	19	—	4	—	—	10	—	79	17·1	—	—	—	3	1	—	—	—	—	4	0·9	84	18·1	129
Newington	122,191	—	47	21	—	1	—	1	7	—	77	8·2	—	1	2	6	5	—	—	—	2	18	1·9	188	20·1	149
St. Olave Southwark	11,480	1	1	1	—	—	—	—	1	—	4	4·5	—	—	—	—	—	—	—	—	—	1	1·1	16	18·2	53
Bermondsey	85,629	—	32	27	—	5	—	—	3	—	67	10·2	—	1	6	5	8	—	1	—	3	24	3·7	126	19·2	166
Rotherhithe	40,643	—	31	6	—	1	—	3	2	—	43	13·8	—	5	2	2	2	—	—	—	—	11	3·5	60	19·2	74
Lambeth	300,048	—	67	50	—	5	—	—	13	—	135	5·9	—	9	3	9	10	—	1	—	2	34	1·5	352	15·3	98
Battersea	168,877	1	30	39	—	5	—	1	14	—	140	10·8	—	—	3	5	8	—	—	—	—	16	1·2	178	13·7	115
Wandsworth	195,612	1	61	31	—	9	—	—	16	—	118	7·9	—	5	1	5	6	—	1	—	—	18	1·2	183	12·2	104
Camberwell	257,575	—	89	57	—	7	—	1	20	—	174	8·8	—	—	2	7	15	—	2	—	4	30	1·5	259	13·1	108
Greenwich	178,367	—	54	32	—	6	—	—	16	—	108	7·9	—	10	4	4	2	—	1	—	5	26	1·9	204	14·9	90
Lewisham (excluding Penge)	86,152	—	28	11	—	3	—	—	5	—	45	6·8	—	—	1	4	2	—	2	—	—	7	1·1	75	11·3	88
Woolwich...	41,439	—	14	7	—	—	—	—	3	—	24	7·6	—	—	1	1	1	—	—	—	2	4	1·3	47	14·8	119
Lee	39,215	—	12	4	—	—	—	—	3	—	19	6·3	—	2	—	1	—	—	1	—	—	3	1·0	35	11·6	152
Plumstead	61,057	—	16	4	—	1	—	—	5	—	26	5·6	—	—	—	—	—	—	—	—	—	2	0·4	63	13·5	64
Port of London	—	—	1	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—

* Including 27 cases of membranous croup.

† Including deaths from membranous croup.

small-pox. These 480 deaths were equal to an annual rate of 1·4 per 1000. No death from any of these zymotic diseases occurred during May in Strand sanitary area; among the other sanitary areas the lowest zymotic rates were recorded in St. George Hanover-square, Westminster, St. James Westminster, Marylebone, St. Saviour Southwark, and Plumstead; and the highest rates in Stoke Newington, St. Luke, Bethnal Green, St. George-in-the-East, Mile End Old Town, Newington, Bermondsey, and Rotherhithe. The single fatal case of small-pox belonged to Shoreditch sanitary area. The 82 deaths from measles were little more than a fourth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Bethnal Green, St. George-in-the-East, Rotherhithe, and Greenwich sanitary areas. The 45 fatal cases of scarlet fever were 23 below the corrected average number; the mortality from this disease was highest in St. Giles and Bermondsey sanitary areas. The 136 deaths referred to diphtheria slightly exceeded the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Stoke Newington, Bethnal Green, Mile End Old Town, Poplar, and Bermondsey. The 142 fatal cases of whooping-cough were 116 below the corrected average number; the mortality from this disease was highest in Clerkenwell, Newington, Bermondsey, and Camberwell sanitary areas. The 25 deaths referred to enteric fever were 8 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 48 fatal cases of diarrhœa were 14 below the corrected average number. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases was nearly 46 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 105 per 1000 during May, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. James Westminster, Stoke Newington, Holborn, St. Olave Southwark, and Plumstead; and the highest rates in Hammersmith, Clerkenwell, Limehouse, Newington, Bermondsey, and Lee.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAINS G. S. M'LOUGHLIN and J. D. Ferguson have been selected to go with an expedition to East Africa to determine British and Italian spheres of interest.

The under-mentioned Surgeon-Captains to be Surgeon-Majors:—Samuel Hickson, Henry J. Fletcher, Edward Davis, Simpson Powell, Frederick W. C. Jones, James Meek, Arthur E. Morris, Arthur O. FitzGerald, Frederick D. Elderton, Robert E. Molesworth, John W. F. Long, Charles L. Josling, John F. Bateson, William T. Swan, Robert L. R. Macleod, Gofton G. Adams, James M. F. Shine, William B. Day, David R. Hamilton, Robert G. Thompson, Charles T. Blackwell, Robert I. Power, Charles R. Kilkelly, Nicholas C. Ferguson, Samuel R. Wills, Michael L. Hearn, Richard H. Hall, John H. Greenway, Richard G. Hanley, Gerald Cree, Samuel C. Philson, John M. Nicolls, and Frederick W. H. D. Harris.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant-Colonel J. S. Wilkins, D.S.O. (Bombay), are placed temporarily at the disposal of the Government of Bombay for employment on plague duty. The services of Surgeon-Captain W. P. Barter, A.M.S., are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on plague duty. The services of Surgeon-Captain W. Westropp White (Bengal), are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on famine duty. The services of Surgeon-Captain F. M. Mangan, A.M.S., are placed temporarily at the disposal of the Government of the Punjab for employment on plague duty. Surgeon-Colonel N. B. Major, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Major-General H. S. Muir, transferred to Egypt. Surgeon-Major J. C. H. Peacocke has delivered over charge of the Karwar Prison.

NAVAL MEDICAL SERVICE.

Staff Surgeon Chas. F. Newland has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet. Fleet Surgeon William Henry Stewart, M.B., has been placed on the Retired List, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets. Staff Surgeon J. E. Penn, R.N., recently invalided from the *Philomel*, has been pronounced by the medical board sitting at the Royal Naval Hospital, Stonehouse, to be unfit for further active service.

The following appointments are announced:—Surgeons: P. K. Nix to the *Pembroke;* A. R. H. Skey to the *Alexandra;* John Menary to the *Minerva;* Jonathan Shand to the *Victory;* E. C. Lomas to the *Warspite;* T. A. Penfold to the *Collingwood;* John Andrews to the *Benbow;* Frederick W. Parker to the *Colossus;* C. J. E. Cock to the *Galatea;* and Geo. M'Gregor to the *Excellent.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Robert Thin Craig Robertson, M.B., 2nd Volunteer Battalion the Cameronians (Scottish Rifles), to be Surgeon-Major. Surgeon-Captain H. F. H. Barham, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 1st Lancashire: Surgeon-Lieutenant T. Hammond to be Surgeon-Captain. 6th Lancashire: Surgeon-Lieutenant R. Humphreys, M.B., to be Surgeon-Captain. *Rifle:* 4th Volunteer Battalion the Devonshire Regiment: Frank Bernard Manning gent., to be Surgeon-Lieutenant. 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: John Loftus Cuppaidge, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Royal Scots Fusiliers: William Roxburgh, M.B., to be Surgeon-Lieutenant. 1st Surrey (South London): Surgeon-Lieutenant L. J. G. Carré, M.D., resigns his commission. 1st Volunteer Battalion the Dorsetshire Regiment: Surgeon-Major W. A. E. Hay resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Major W. Mortimer to be Surgeon-Lieutenant-Colonel. 4th (Stirlingshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant J. Brown Robertson, M.B., resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: William Salisbury Sharpe and Frederic Harvey to be Surgeon-Lieutenants. The Woolwich Company: Surgeon-Captain F. L. Stephenson, to be Surgeon-Major.

THE CARE OF THE WOUNDED IN NAVAL WARFARE.

The *Archives de Médecine Navale et Coloniale* for April contain an important article on the care of the wounded on board ship during and subsequently to an engagement. The writer, Dr. Fontorbe, *Médecin en Chef*, who has twice filled the important post of *Médecin d'Escadre*, has embodied his views in the form of a report addressed to his commanding officer, Admiral Gervais, and the latter, in addition to his concluding comment—"Seen: I associate myself with the ideas emitted by Dr. Fontorbe"—has interspersed several approbatory notes in the body of the document. Owing to the transformation which of late years has taken place in naval architecture, as well as to the equally complete transformation which has resulted from the introduction of antisepticism, the notions that formerly prevailed regarding the management and treatment of the wounded in maritime warfare have been entirely revolutionised. For a little while experts differed considerably as to the best way of meeting the altered circumstances, but at the present time there seems to be a consensus of opinion on the point which may be expressed according to the following formula:—1. The wounded during an action constitute an encumbrance which should be removed as quickly as possible. 2. The means resorted to for this purpose should not of themselves constitute an encumbrance greater than that arising from the presence of the wounded men. 3. The employment of combatants for the removal of the wounded is totally inadmissible. Not only would such a procedure tend to create gaps on the line of fire deeper than those produced by the missiles of the enemy, it would also interfere with the supply of ammunition, and prove a source of disorder in several other ways. 4. The removal of the wounded should devolve exclusively upon trained men, who are not

otherwise liable to be actively engaged in the action, and should be carried out under the direction of a medical officer, who alone possesses the technical knowledge necessary to prevent a possible aggravation of the injuries *in transitu*. According to existing regulations the duties of the medical staff on board a French man-of-war are thus defined: "During an engagement the principal surgeon and the rest of the medical staff shall remain at the stations that have been assigned to them by the commanding officer." Dr. Fontorbe looks on this ordinance as obsolete, and wishes to substitute an amendment to the following effect: "The medical staff, the hospital (sick-bay) attendants, together with the non-combatants who have been told off in advance for the purpose, are alone permitted to collect and remove the wounded during an action. This duty is to be performed under the supervision and control of the surgeon-in-chief, who receives his authorisation from the commanding officer." Already in certain ironclads these views have been adopted, and it appears that in the German navy an organisation on similar lines has been worked out in detail. The opinion of Admiral Gervais, expressed in a note, is as follows: "I am perfectly convinced that the management of the operations for the removal of the wounded should be entrusted to the medical officer." Dr. Fontorbe next considers the important question of accommodation for the wounded. In some of the war-vessels now afloat not more than twelve wounded men could be suitably accommodated on standing cots within the protected area, while with the exception of the *Redoutable* the maximum number in the most roomy would seem to be twenty-five. Ironclad hospital ships have been suggested, but the idea is premature, if not Utopian. There is, however, a Ministerial order that when a new war-vessel is being designed the provision of suitable accommodation for wounded men shall be taken into account. Meanwhile, every medical officer in charge of a ship should make a study of the various spaces at his disposal, taking counsel with his commanding officer as to the best way of utilising them. There are many equally important matters treated of in this interesting paper, including the transport and treatment of wounded men, the provision and storage of medical and surgical equipment, the necessity for a thorough application from the first of the antiseptic system, &c., but, unfortunately, our overcrowded space does not allow us to deal with them.

ENTERIC FEVER IN THE FRENCH ARMY.

Although, thanks to enlightened sanitation, enteric fever has diminished greatly in the French Army during the last few years, the disease has not yet been completely stamped out, and epidemics of more or less gravity continue to be reported occasionally. On May 3rd the 141st Regiment of the Line was ordered from Marseilles to Carpiagne to go through a course of musketry practice. While quartered at the insalubrious seaport the corps had suffered to a slight extent from typhoid fever, but shortly after its arrival at the ranges, where the men had to live under canvas, the affection assumed a more serious form, and it was reported that upwards of a hundred cases had occurred. Dr. Dujardin-Beaumetz, Inspector-General of the Health Department, was sent to inquire into the origin of the outbreak, and apparently the barracks of Saint Charles at Marseilles are at fault, for disinfecting operations on an extensive scale have been undertaken in them. The remainder of the troops at Carpiagne, numbering in all about 3000 men, are apparently in good health; and yet there are not wanting critics who seek to ascribe the fever to military *surmenage* and the hardship of camp life. During his inspection, which was most exhaustive, Dr. Dujardin-Beaumetz was accompanied by Surgeon-Major Dziewonski; and the record adds that all the recommendations that were made with a view to the rooting-out of the evil were immediately given effect to by General Canonge, "who is himself a distinguished member of the medical profession."

THE ALLEGED UNSATISFACTORY STATE OF THE MILITARY FORCES.

The Service Members' Committee of the House of Commons have addressed a letter to the Prime Minister calling the Marquis of Salisbury's attention to the very unsatisfactory condition of the military forces at the present time, and pointing out that the Forces on the home establishment, more especially those of the Line and Horse and Field Artillery, are inadequate to meet the requirements. The linked battalion system does not seem to have answered the expectations formed of it by its advocates. The recruiting question is an old difficulty, liable to fluctuations from time to time; but it is becoming more and more obvious that the supply of army recruits is inadequate. The remedy is not easy to find, but with a voluntary system of recruiting it means that additional inducements to enlist must be held out, and that the pay of the soldier will have to be increased. The Treasury is not likely to give its assent to this unless it is obliged to do so; but the step will, we presume, have to be taken sooner or later.

ARMY TEMPERANCE WORK IN INDIA.

The Army Temperance Association is successfully carrying on its good work in India. A meeting of the association was recently held at Simla, at which the Viceroy of India, the Commander-in-Chief, and other officials spoke. Sir George White gave some interesting details. The number of members of the association was 22,810 last year. Touching on court-martials, His Excellency said that while 4·70 per 1000 represented the number of convictions amongst abstainers, those among non-abstainers amounted to 42·27 per 1000; and the figures just received from the Principal Medical Officer of H.M.'s forces in India showed that last year only fourteen cases of delirium tremens had been admitted into hospital, whereas if the army in India had been of the same strength as at present the admissions would have been 481. Sir George White also alluded to the military and fighting qualities of the Turkish soldiers, who were water-drinkers.

THE ALDERSHOT SEWAGE FARM.

We notice that this old question is again to the fore. Our service contemporary, the *Army and Navy Gazette*, of the 5th inst. states that it is a never-ending subject, and that it is difficult to know how it will be ultimately settled. The present sewage farm has been condemned long ago, as everybody knows; and notwithstanding that some improvement has taken place under a new system of management the fact remains exactly where it was—viz., that a new sewage farm on a new site is absolutely necessary, and the sooner this is carried into effect the better.

MOVEMENT OF TROOPS IN THE COLD WEATHER IN INDIA.

According to the Indian papers the movement of the troops in India during the next cold weather will be on an extended scale. Many of them will be on the march for some time, and the marches will be through districts at a distance from the large cantonment stations. Troops are usually very healthy under such circumstances during the cold season in India if proper sanitary precautions be taken, and it is thought desirable that British soldiers should occasionally be more *en evidence* than they are in remote districts of India.

THE WHITE CROSS LEAGUE.

We have received a copy of a resolution of the Council of this society which has received the approval of the Archbishop of Canterbury, the president. The resolution respectfully calls upon the archbishops and bishops to confer with the senior authorities in the Royal Navy and Army with a view to making it generally known that fornication is a deadly sin and an evil highly prejudicial to Her Majesty's services.

SUBATHU.

It will be recollected that there has recently been an outbreak of enteric fever among the troops at Subathu, and that this hill-station has not had a good medical history in the past. The Government of India have sanctioned a project for the provision of a pipe water-supply for the cantonment, and an officer of the Royal Engineers has been deputed to prepare a detailed estimate of the cost of the work.

THE MEDICAL SERVICES IN INDIA.

The plague and famine in India have required the presence of a large number of medical officers, and the Government of India has consequently been compelled to restrict the number of medical officers going on privilege leave.

THE HEALTH OF THE TROOPS IN INDIA.

The despatch of the Government of India on the contagious diseases question is understood to have been transmitted home by the incoming mail.

Sir H. S. Cunningham's rejoinder to the reply of Mr. Henry J. Wilson, M.P., to the former gentleman's charge that he (Mr. Wilson), in his pamphlet "A Sanitary Failure," had garbled quotations from Blue-books, has been published in leaflet form. Mr. Wilson boldly asked for proofs of Sir H. S. Cunningham's accusations, and these proofs are here given. In one part of the letter he purports to show that Mr.

Wilson has been guilty of suppressing a passage which reveals the fact that the Army Sanitary Commission has throughout concurred with the Government of India in insisting on the necessity of protective measures.

Correspondence.

"Audi alteram partem."

"SECONDARY RASHES IN SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 29th is an editorial notice of an article by Dr. J. O. Symes in which he attributes the nephritis, dermatitis, and other inflammatory changes of certain specific fevers to the elimination of the virus from the body. Perhaps I may be allowed to point out that in 1890 I advanced the theory that such organic lesions of skin, kidney, alimentary and respiratory tracts, and so on, were due to the excretion of an irritant from the blood. Further, I traced the analogy between specific bacteria (and their products), certain drugs, and such chemical tissue irritants as that of gout. The facts are published in a small book on Excretory Irritation lately issued.

I remain, Sirs, yours faithfully,

Temple, E.C., June 2nd, 1897. DAVID WALSH, M.D. Edin.

"URIC ACID IN THE BLOOD."

To the Editors of THE LANCET.

SIRS,—Dr. A. P. Luff has informed your readers[1] of the extreme delicacy of the murexide test. Nevertheless, there is an exact procedure necessary to secure infallible evidence of small quantities. For example, one large drop of solution of potassium urate containing 0·4 per 1000 of uric acid—i.e., about a thirtieth of a milligramme of uric acid—gives me one success and three failures, and yet my general procedure has been the same. So that if these experiments were applied to four different solutions I might have concluded uric acid to be absent in three of the solutions. "The Physiology of the Invertebrates," by A. B. Griffiths, contains a demonstrable history of uric acid in our fauna from the protozoa to the mollusca, yet this excellent work does not give us the exact data whereby we may obtain the infallible evidence so necessary to be had. One grain of ammonium chloride added to twenty minims of an alkaline solution of urate immediately precipitates the uric acid, except 1 per 28.000; five minims solution (1—4) of ammonium chloride also determines rapid deposition of urates in about half an hour. Applied to the blood I thought I could obtain morphological evidence of urates in the blood corpuscles by means of this alkaline ammonium chloride test. In the absence of uric acid from normal blood, as demonstrated by Dr. Luff, I would ask, What are these coloured microcytic or albocytic granules about a micro-millimetre in size obtained by this test used with a drop of blood from a pricked finger? In the "Manual of Pathological Anatomy" of Cornil and Ranvier, page 81 (translation), it is stated that "everywhere the deposit is primarily made in the cells." Again: "The primary appearance of uratic infiltration in the cells proves that the latter play an active part even in the phenomena of simple deposit, and differentiates this process from that of calcification, in which infiltration commences primarily in the ground substance." It has appeared to me that ammonia may be a factor in the commencement of urate deposition. Perhaps Dr. Luff will be good enough to formulate an exact procedure for the murexide test for workers.

I am, Sirs, yours faithfully,

JOHN BARKER SMITH, L.R.C.P. Lond.

Holmdene avenue, Herne Hill, S.E., May 25th, 1897.

"THE EXAMINATIONS FOR DENTISTS."

To the Editors of THE LANCET.

SIRS,—In the report of the proceedings of the General Medical Council on May 29th, which appears in THE LANCET of June 5th, I notice that Mr. Thomson objected to dental students being questioned on parotid fistula, tongue-tie and its treatment, removal of the tongue, sebaceous cyst of the scalp, dermoid cyst, wound of the radial artery, gummata, and the stages of syphilis, and their treatment. Mr. Bryant, as representative of the Royal College of Surgeons of England, was asked whether he thought this an examination suitable for gentlemen who were seeking a qualification as dentists pure and simple, and he said that he would put the matter before the College. May I say, as a dentist and a teacher, that I should be sorry to see the subjects mentioned struck out of the examination? I should be very sorry to see dental surgeons trespassing on the domain of surgery, but dental students ought to be taught everything that may be of use to them in their daily work, and although the questions objected to may at first sight seem beyond the province of a dentist I think a good deal could be said in their favour. As regards parotid fistula, which is first on the list, one must remember that sinuses arising from diseased teeth, especially from wisdom teeth, are far from uncommon in the parotid region; and in the dental operation for the removal of impacted wisdom teeth the slip of an elevator, or the external pointing of a large abscess, may be followed by a salivary fistula, so it is just as well that a dental surgeon should know that there is such a thing as a salivary fistula in order that he might refer the case to a surgeon for treatment. With the same object in view I think it desirable that a dental surgeon should know anything that would help him to diagnose a dental or dentigerous cyst from any other kind of cyst, whether dermoid or sebaceous. It will do the dental surgeon no harm to know the difference between a tongue-tie and the adhesions between the mucous membrane of the lip and gum which not infrequently occur in the incisive region as the sequel of ulceration set up by denuded roots of teeth in children. Dental surgeons should also be well versed in all the means available for the arrest of hæmorrhage, and I think that a candidate who knows how to deal with the various forms of hæmorrhage that occur in the mouth might as readily apply the principles of arresting arterial hæmorrhage to the radial artery as to the facial. Be this as it may, I think it very desirable that particular attention should be given to syphilis in its various stages and its treatment. Primary chancre of the lip is uncommon, but the dental surgeon should recognise it, not only for his own sake, but for the protection of other patients whom he may be treating. Specific lesions of the secondary stage are often seen in the mouth, and as for tertiary syphilis dental surgeons are often required to restore artificially the destruction of the hard and soft palate that follows gummata and necrosis. Hereditary syphilis modifies the form of certain teeth, affects their arrangement, structure, and liability to caries. It is needless to refer to the connexion between inherited syphilis and cleft palate, or to add that much can be done by the dental surgeon in the treatment of cleft palate by artificial means.

Mr. Thomson objects to dental students being examined on removal of the tongue, but one should recollect that a large number of the operations required are for removal of epithelioma arising in the first instance from the irritation caused by a decayed tooth. The greater the knowledge of the dental surgeon about epithelioma and its treatment the smaller will be the number of tongues that require removal, and the more the dentist knows about the difficulties of the operation the less likely will he be to attempt it. There are other reasons for not restricting the examination questions to the teeth and their immediate surroundings, for, regarding the profession of dental surgery as a whole, we find that every year shows an improvement in the educational standard. Qualified men are taking the place of unqualified men, and many of us look forward to the time when the dental diploma will be taken after a registrable medical qualification, and then, indeed, will dental surgery be acknowledged a true specialty of surgery. I am, Sirs, yours faithfully,

F. NEWLAND-PEDLEY, F.R.C.S. & L.D.S. Eng.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—I had not intended to reply further to Dr. Bastian, but Dr. Harry Campbell renders it necessary. In his last letter[1] Dr. Bastian said "The *acquirement* of language is a

[1] THE LANCET, May 22nd, 1897.

[1] THE LANCET, May 22nd, 1897.

twofold process, comprising what is termed a receptive and an expressive side" (the italics are mine. If language *is* acquired does it matter whether or not it is a twofold process. I stated that it was acquired, and Dr. Bastian disputed it). Once again let me beg your readers to think in concrete, not in abstract terms; let us take the case of a particular word. It appears, then, if I understand my censor right, that an English child learns—i.e., acquires—the word "picture" for instance, but does not learn to *say* it. The distinction is fine but, if Dr. Bastian is right, important. This sound, like all others, is produced by the very nice and complex coördination of a large number of muscles. In other languages the same object is indicated by totally different sounds, each requiring a different coördination of the muscles. Are we to understand then that, apart from all experience, from all tentative efforts, from all *learning*, the English child is able to make this particular coördination. But the word "picture" is not comprised in the French language, and therefore the power of making this particular coördination of muscles cannot arise apart from experience in the French child; it must, of course, be acquired by him. Nevertheless, the French child, reared in England, speaks it with as much facility as the English child, and, if he subsequently learns his native language, speaks that with an English accent. Does not this prove that language is acquired in its expressive as well as its receptive side—i.e., that the power of making quickly and easily all those separate delicate muscular coördinations by means of which the many words of a language are expressed is acquired—just as the power of making quickly and easily all those separate delicate coördinations by means of which we are enabled to write is acquired? If, as Dr. Bastian maintains, speech is a "deferred primary automatic movement," why does the French child reared in England subsequently speak French with an English accent? Dr. Bastian rests his case on two or three children who apparently began to speak by uttering certain words with singular distinctness. But had these children before then been absolutely dumb? Had they never before attempted to coördinate their speech mucles by uttering the usual babbling and inarticulate sounds that infants make, and which, in the ordinary child, may be observed to grow in distinctness with practice till at length the child speaks clearly? The case of bi-pedal progression is exactly the same as that of speech. The infant manifestly cannot coördinate its muscles of locomotion at birth, and, as I think, very plainly learns to do so. In the case of Sir R. Quain's daughter, was she never allowed to use her legs, and so acquire precision of movement? Was she never allowed to crawl about, for instance? Was she never placed on her feet? The muscles of the upper extremity are much less powerful and adapted for locomotion than those of the lower, yet an exceptional man, who had otherwise developed and learned to coördinate them, might at the very first attempt walk on his hands. Thus also might an exceptional child walk at the first attempt on her feet.

Next, as to Dr. Harry Campbell. Low in the animal scale an animal develops fully, mentally and physically, in the absence of all stimulation other than that of sufficient food. In other words, it is a product of heredity pure and simple; exercise and use is not necessary to the development of its mind and body. Thus we see the caterpillar metamorphosed into the butterfly while hanging quiescent; thus even so high in the scale as the frog, if a tadpole finds its way through a crevice into a small cavity, it will there, if it obtains sufficient food, though it leads a purely vegetative life, develop into a normal frog. But as we ascend in the animal scale we find that this power of developing in the absence of stimulation (of exercise, of use) is gradually lapsed, and replaced by a power (which does not exist low in the scale) of developing in response to stimulation. Compare, for instance, a dragon fly at one end of the scale and man at the other. Physically a dragon fly, in the absence of stimulation, undergoes extraordinary metamorphoses; mentally it can *instinctively* coördinate all its muscles, and has besides many other wonderful instincts, but so far as we know it does not change physically in response to stimulation; mentally it learns and remembers nothing. Even to an animal so high in the scale as a fish has memory been denied,[2] and of course all that lies within the memory is acquired. Far different is the case of man. He is born helpless; his physical structures "immature," his mind a blank; but subsequently in response to stimulation (use, exercise, experience), he develops enormously both mentally and physically. On consideration it will be seen that nearly all that separates the adult man from the infant is acquired (i.e., has resulted as a response to stimulation, has resulted from exercise and use). For instance, if the joints of an infant's limb—e.g., the arm—be locked, as by disease, so that the limb cannot be used, it does not develop. Again if a man—e.g., a blacksmith—uses his muscles beyond the ordinary he gets an extra development of them, and this additional development is said by biologists to be acquired. But, as we see, the "normal" standard of development is attained as a response to stimulation, similar in kind but less in amount, whence it is plain that the normal degree of development is also acquired. Mentally, as I say, the infant's mind is practically a blank. It can instinctively coördinate only a few groups of muscles—e.g., those of breathing, sucking, defæcating, &c.—and in these the coördination is never very delicate. How different is the mind of the adult man with its wonderful power of delicately coördinating the different groups of muscles, and with the vast contents of its memory, and all that arises out of memory.

Surely then I am right in saying that the faculties of language and bi-pedal progression are both acquired. Dr. Harry Campbell says that the majority of physiologists think otherwise. But this is not a question of counting heads but of facts, and the discoverer of a fact is always at first in a minority of one.—I am, Sirs, yours faithfully,

Southsea, June 1st. G. ARCHDALL REID.

[2] THE LANCET, Jan. 23rd, 1897, p. 257.

THE GENERAL MEDICAL COUNCIL AND MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—When the subject of Medical Aid Associations came up for discussion at the May session of the General Medical Council I tried to show that if the Council took action it must attack those practitioners connected with hospitals at which medical aid was given as those practitioners who act as officers to medical aids. To establish this statement I referred to the gross and sad state of affairs at Guy's Hospital where a patient by paying 3*d.* per week or 6*d.* per fortnight (not 6*d.* per visit be it noted) can obtain, as an out-patient, medical or surgical treatment and medicines. This "charity"—if the payors will permit the use of this word—appoints four assistant surgeons and four assistant physicians and pays such practitioners £100 per annum each. During the year ending March 31st, 1895, the out-patients paid £928 and the in-patients £3965. As this seems a fair commercial speculation—because I fail to see how it could *honestly* be called *charity*—I asked, How many out-patients were *refused* treatment? As was to be expected, no answer could be given. Threepenny-a-week patients represent income, and income must be maintained. Hence the present "fifteen per cent. charity" hospital business which is now degrading our charities. Then look at the result of this demoralising system. A young practitioner wishing to live and to compete with the practitioners of Guy's "cuts" their price and charges, not threepence, but one penny per week. Thus we have the various medical aids and their baneful accompaniments. Go a step further down, and we have the private practitioner trying to "cut" the charity prices of Guy's and of the Medical Aids. He charges threepence and sixpence *per visit*, not per week. He is sneered by the chief sinners, who all the time use the charity to kill off competitors. My advice to each practitioner is—Have nothing to do with clubs, medical aids, or sixpenny fees, and above all shun, as one should shun evil, all penny and threepenny a week hospitals.

Mr. Bryant stated at the Council meeting that Guy's was his hospital and that he "must repudiate in the strongest words he could use the accusations which had just been made against it. Dr. Rentoul was entirely in the wrong, and if he would take five minutes' trouble ..... he would probably come back next session and apologise for bringing forward such a false accusation." This is strong language for Mr. Bryant. He suggests I should bring forward documents in proof. I gladly do so. May I refer him to the "Annual Report of Guy's Hospital" for 1895, and will he ask the superintendent of Guy's to show him a copy of a letter dated

Oct. 16th, 1896, which the superintendent kindly sent to me on this very question?

My stay upon the Medical Council may be long or it may be short. But if Mr. Bryant thinks for one moment that I deliberately concoct statements to wilfully mislead the Medical Council or that I am going to accept his suggestion of "apologising" to the Council because I have been "guilty" of making a statement true in word and fact, then all I can say is that he has not taken my measure with accuracy.

If Mr. Bryant will refer to page 2 of the above annual report he will find that not only are *out*-patients treated for threepence per week, but that in-patients are treated for from 1 to 3 guineas per week. Practitioners would be also edified if, in his reply, he would state the maximum and minimum fees charged by the Practitioners connected with Guy's *in* pay patients, above or exclusive of the 1 or 3 guineas per week. If he will further refer to the Report of the House of Lords on "Metropolitan hospitals," 1892, p. 10, he will find further documentary reference to the sales of charity at Guy's.

Awaiting his reply,

I am, yours obediently,

ROBERT R. RENTOUL.

THE NEED OF ORGANISATION IN THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I have received a pamphlet entitled "The Just Claims of the Provident Dispensary System" by the secretary of the Provident Medical Association,[1] and have no doubt but that most other London medical men have had copies sent to them. The pamphlet emphasises strongly the necessity for organisation amongst medical men, and as this formed the subject of a paper I had the honour of reading before the Hunterian Society in 1895[2] I venture to send you a few observations on the pamphlet in question. In many of his remarks, as contained in the pamphlet in question, I agree very cordially with the writer, but I disagree with him *in toto* as to the result he arrives at in respect to the fees to be received by medical men attached to provident dispensaries—one of the crucial points.

I must premise that I am able to state on the strength of the observations of a patient of mine—observations covering fifty years' work in a leading builder's office—that wages have increased within the period I have mentioned some 80 per cent., that about 80 per cent. less work is done, and that the work on the whole is inferior to what it used to be, and that, as we all know, there is a marked tendency amongst this class in the direction of undervaluing (from a monetary point of view) the services of medical men.

It is fairly certain that the expenses of living have not increased in the same proportion as wages. Per contra, a medical man cannot, I think, live on less than £400 per annum, with an additional £200 for his trap. If he be properly paid his income, therefore, should amount to at least £600 per annum. The author of the pamphlet evidently considers that "between 4½*d*. and 6*d*. per attendance, whether at the dispensary, the doctor's surgery, or at the patient's house," is a fair remuneration. In order to earn an income of £600 24,000 patients per annum would have to be seen, or at the rate of about 66 per diem all the year round at 6*d*. each. If he does confinements the additional income so earned will probably allow him to have his Sundays free, but would not pay for holidays. In order to be able to earn this, starting at a far less income at age twenty-three or so, he has to lay down capital and to devote five years to acquiring his professional knowledge.

Does it not emphasise the necessity for organisation amongst us when we are assured by one who ought to know about it that such are the conditions under which we should expect to live? The reasons adduced are want of medical union and competition with "charitable" organisations, and not because we know less than we did or do our work less satisfactorily.

Into the fallacies respecting the declarations made by candidates for membership respecting their incomes, the amount of responsibility attaching itself to medical officers of provident dispensaries as to the admission of well-to-do persons into the dispensary—in respect to both of which I think he takes a totally wrong view—I will not enter. I feel that the challenge thrown down should not be allowed to remain unanswered, especially since the author states that "the interests of the general medical practitioner have been placed (in the 'Battle of Clubs') somewhat in opposition to the various means by which medical advice is being obtained." It would appear that it is time they were.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS.

Fellows-road, South Hampstead, N.W., June 7th, 1897.

[1] A paper read at a special meeting of the Council of the Charity Organisation Society on Jan. 4th, 1897.

[2] Medical Magazine, June, 1896.

THE SUPPLY OF TETANUS ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—I notice with some interest a case of traumatic tetanus treated successfully by antitoxin reported in THE LANCET of June 5th by Dr. Chalmers. Curiously enough, this case and a similar one, of which the notes were published in THE LANCET of April 10th, 1897, occurred in June of last year. In sending up those notes I drew attention to the difficulty of obtaining a supply of antitoxin, and Dr. Chalmers has further emphasised this fact. I wish to point out that so long as the only places at which the antitoxins can be obtained are either Messrs. Allen and Hanburys, Messrs. Burroughs and Wellcome, or other chemists in London, if the want arises on a Saturday after those firms have closed their places of business a delay of forty-eight hours is at present unavoidable. That forty-eight hours may mean a matter of life and death in some cases is indisputable. Surely it is time that a supply of the various antitoxins should be kept by the Public Health Departments in the various large towns throughout the kingdom, so that when required they should be easily obtainable at short notice.

I am, Sirs, yours faithfully,

Brighton, June 7th, 1897. ARTHUR H. BUCK, F.R.C.S.

MESCAL INTOXICATION.

To the Editors of THE LANCET.

SIRS,—In my note on the above subject in THE LANCET of June 5th I neglected to mention that I obtained the buttons through Messrs. Potter and Clarke, 60, Artillery-lane, E., who are able to supply them in small quantities.

I am, Sirs, yours truly,

HAVELOCK ELLIS.

Carbis Water, Lelant, Cornwall, June 9th, 1896.

THE DIAMOND JUBILEE.

To the Editors of THE LANCET.

SIRS,—Your suggestion regarding the publication of an official programme of the proceedings on the 22nd inst., by which all, even the poorest, of Her Majesty's subjects witnessing the spectacle should be able to identify the various bodies—the troops, colonial corps, and detachments—representing the colonies and dependencies of the British Empire, strikes me as a very wise and excellent idea. The occasion is altogether unique, and the opportunity should not be lost for enabling everybody to realise the geographical extent of the various territories within the sphere of British influence and under the British flag. It would obviously add immensely to the interest of the occasion if those taking part in the procession could be readily identified by the crowds of spectators as the panorama of living pictures passed along. What is wanted is that the power and responsibility of this country, the interdependence of Great and Greater Britain, and all that this implies in the way of the ties—social, commercial, and sympathetic—uniting them with one another, of which the Queen, as the head of the Empire, is the symbol, emblem, and token, should be brought home and impressed upon the imagination of the people. The official guide should be of small and handy size so that its pages could be easily turned over and referred to, and it might also be sufficiently illustrated to fulfil its purpose. It should not cost more than a penny or a halfpenny. It would sell in thousands—possibly millions—and realise a large profit, and the surplus, after the payment

of all expenses, would make a handsome addition to the Prince of Wales's Hospital Fund.

I am, Sirs, yours faithfully,

June 7th, 1897. VIATOR.

*** Our correspondent will see that our suggestion has been adopted by the Prince of Wales's Hospital Fund, so that the proceeds will go in the direction in which he thinks they should go.—ED. L.

THE BATTLE OF THE CLUBS.[1]

(FROM OUR SPECIAL COMMISSIONER.)

COVENTRY.

History of the Coventry Provident Dispensary.—Action of the Medical Profession against this Institution from 1829 up to the Present Day.—Formation by the Medical Union of a Public Medical Service.

IN 1839, when public opinion at Coventry was much exercised by the question of hospital management and the claim of the working men subscribers for a share of representation as governors of the Coventry and Warwickshire Hospital, the Coventry Provident Dispensary also came in for a large measure of criticism. At a conference held that year to discuss the administration of the Poor-law, Mr. F. Townsend, Member of Parliament for Stratford-on-Avon, delivered a speech expatiating on the advantage of provident dispensaries as inculcating habits of thrift, tending to reduce the poor rates, and as most beneficial generally to both workmen and medical men. The storm seems to have found its origin in this attempt to prove too much. Mr. Stanton, formerly Mayor of Warwick, who had presided at the previous annual meeting of the Coventry Dispensary, does not appear to have been very favourably impressed with the experience he then gained, for he argued against the optimist view taken by Mr. Townsend, M.P. Mr. Stanton urged, on the contrary, that at Coventry there were members of the dispensary "who rode in their carriages, and that the medical officers had a great objection to attending such members. At Warwick no one was admitted who earned 30s. a week, and at Leamington the line was drawn at 40s." These speeches, reported in the local press, gave rise to a controversy, and the arguments for and against such dispensaries, with which we are now familiar, were brought forward. It was pointed out that there were about 20 000 members of the Coventry Dispensary and only five medical men. These medical men, considering their many other duties, could not attend properly to the health of such a vast population. At the price paid their services were charitable services, and it would not be possible that so many persons in the town were in need of charity. To prevent the abuse by the rich of institutions meant for the poor many proposals were made. Among others it was suggested that a list of all members of the dispensary should be printed and deposited at the Free Library, and the public invited to look over the list, so as to denounce all those who were too rich to belong to such an institution. Then the names of all candidates for membership should for the same purpose be hung up outside the dispensary for a month. At a meeting of the Warwick Board of Guardians the Coventry Dispensary was mentioned, and, according to the *Coventry Standard* of June 22nd, 1889, Mr. Longe, Local Goverment Board Inspector, inquired: "Do you mean to tell me that half the population of Coventry are tied down to have their medical attendance from these four or five doctors?" And on receiving a reply in the affirmative he exclaimed: "What a monopoly!"

These attacks on the dispensary did not, however, check the growth of that institution. At the annual meeting held in the spring of 1890 the secretary was able to report an increase in the number of members, amounting to 1462 for the year, and this brought up the total membership to 21,010. Lord Leigh, who presided, explained that the Coventry Institute was the third provident dispensary founded in England, the first being at Southam and the second at Northampton, and urged that such institutions materially helped to prevent pauperism. The next annual meeting was held in April, 1892, and then, according to the *Coventry Standard* of the 30th of that month, the chairman, Mr. J. Bill, said that "it was difficult to give the exact membership, but approximately it was about 25,000 or 26,000." The medical officers' reports showed that during the year 21,305 cases of illness were entered, but as cases are often entered more than once this probably did not represent more than some 10,000 persons relieved. Their drug bill had amounted to £519 8*s.* 9*d.* When to these remarkable figures we add that there were also numerous medical aid societies organised by life insurance companies and various benefit clubs and medical men's private clubs, it will be seen that little remained for private practice. Though there were not many medical men practising at Coventry the incomes they earned were small and quite out of proportion to the population of the town. The figures given by the dispensary proved that matters were getting from bad to worse, and it was under the stress of these distressful circumstances that it was at last determined to summon a meeting of the profession and see what could be done.

This meeting was held on Dec. 10th, 1892, and of the twenty medical men then in practice at Coventry sixteen were present, including some of the staff of the Coventry Dispensary. The meeting had been convoked to discuss the question of imposing a wage limit in connexion with contract work for certain clubs. Dr. Phillips spoke, urging that the members of the profession should consider themselves as a body of men working for a common end—namely, to benefit their fellow men and to receive a just remuneration for their labour. This latter end in any case was not realised, for at least from £7000 to £8000 per annum were withheld from the medical profession. Dr. Phillips pointed out that though the population of Coventry only amounted to 52,000, some 26,000 of this number were said to belong to the Coventry Dispensary. Some 13,000 others belonged to various clubs, and there were about 3000 hospital patients, making a total of 42,000 out of a population of 52,000 who were not paying any medical man. The profession rather than the general public was responsible for this state of affairs. It was obvious that the public would take advantage of the cheapest market. The dispensary medical officers had been paid the previous year £1723 4*s* 5*d.* for attending to 26,000 persons, and this meant 1*s.* 4*d.* per annum, or $\frac{4}{15}$th of a penny per week, per member. Had these dispensary medical officers received a penny per week per member they would have shared between them £5600 instead of £1723. Then when a consultation was required a member of the dispensary could obtain a second opinion from any of the other medical men on the staff without paying a consultant's fee. To remedy this deplorable state of affairs Dr. Phillips thought that either a wage limit must be established or the profession must take the whole matter in their own hands and organise a public medical service entirely managed by themselves. After some other speeches the meeting carried a resolution to the effect that a wage limit should be imposed. It was also resolved that a deputation should wait on the managing committee of the dispensary to bring the matter of a wage limit before them, and the three medical men belonging to the dispensary staff who were present promised to support the deputation. This promise apparently was not fulfilled and a serious dispute ensued.

The dispensary medical men now withdrew from the movement which the other members of the profession were carrying forward. Many more complaints against the dispensary were made. The subscription was denounced as too low. This was fixed at a penny per week for all persons above twelve years of age, and a halfpenny for children under that age, "except in a family consisting of not more than three children, when a penny per week, and in a family of more than three children twopence per week shall be considered sufficient for all children under twelve years of age." Thus three children could be insured against sickness for a penny and an unlimited number of children for twopence. The argument was that children gave more trouble than adults, and that therefore the subscription for each child should be the same as that for adults. But even the adults do not all pay a penny a week. The dispensary will take any club at 3*s.* per annum per member. Private clubs given up by medical men were taken by the dispensary at this low figure, and several medical men had private clubs. An incident of this description occurred a few weeks ago. Dr. Phillips gave up the "Briton's Pride," a branch of the Oddfellows' Society. They went to several of the

[1] A reprint of the previous articles on the above subject has been published in book form entitled "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1*s.*

medical men belonging to the reform party, who all refused to take the club for less than 3*s.* 6*d.*, but the dispensary gladly took the club for 3*s.* Then, again, the rule is that no member of the dispensary can claim medical benefits before he has been three months on the books, but rule No. 23 says :—

"No one actually labouring under sickness can be admitted a member unless two healthy persons above twelve years old enter at the same time, and each pay one year's subscription in advance. Any such person unable to procure two other persons to enter with him shall, by paying 10*s.*, be entitled to the benefits of the institution for three months, and afterwards continue a member by paying the usual rate of subscription."

Practically this means that the medical men are, by their services, to pay a commission to those sick persons who join when sick and are able to recruit two new members. Why should the medical men be the only persons to pay this commission? All this gives a commercial and unprofessional colouring to the institution which is naturally obnoxious to the profession. Finally, the fact that the dispensary medical men agreed to meet each other in consultation and not to call in any other Coventry practitioner was considered very objectionable.

The deputation which waited on the committee of the dispensary and spoke on behalf of the general meeting of the Coventry practitioners, having totally failed in its purpose, another general meeting of the profession was convoked on Jan. 24th, 1893, and it was then decided to establish a public medical service. This was an important departure, and the rules of the new body merit a detailed examination. They were drawn up finally on April 10th, 1893, when the following resolution was unanimously adopted by the eleven medical practitioners present—namely, that the object of the public medical service should be :—

"To provide efficient medical attendance at a small weekly payment for members of families resident in Coventry and Stoke whose average annual income does not exceed £2 per week."

The principle of admission for members of the profession is based on the desire to prevent anything like a monopoly arising. All fully qualified practitioners are admitted to membership. The only exception is given in Rule 10, in the following words :—

"That any member of the medical profession commencing practice in Coventry without an introduction shall not be eligible for election to the service during his first year of residence in the city."

The committee of management consists of all the medical staff of the service, which meets quarterly, and oftener when necessary. A sub-committee of at least three members, elected at each quarterly meeting, attends to all current business. Rule 7 is very important, for it deals with a difficult question. It states :—

"That a number of chemists be invited to coöperate by dispensing the prescriptions of the service, and that payment at the rate of not more than 1*s.* per annum be allowed for each patient on the chemists' lists."

The word "patient" is, I think, a mistake; the word member should have been employed. By this means the dispensing chemists, who are all naturally much opposed to the Coventry Provident Dispensary, have been won over to the Coventry Public Medical Service and readily accepted these terms. There are twelve dispensing chemists on the list of the Public Medical Service, and each subscriber selects the chemist he prefers. The subscriber or member likewise selects the one he prefers out of a list of ten medical men, and he can go to the private surgery of the medical attendant between 9 and 10.30 A.M. or 6 and 7 P.M. Of course, if the patient is not well enough to go out his medical attendant will visit him at his own house if a message to that effect is sent before 10 in the morning. This system scatters the patients among the different druggists' shops and the different surgeries, instead of crowding them together in one waiting room as at the dispensary. It is more convenient to the medical men, who are thus enabled to stop at home; it is more advantageous to the dispensing chemists, who do not lose the custom of the members; and it avoids the risk of infection which the crowding together of all the patients in the single room of a dispensary must occasion. The terms of membership are a penny per week per member, whether the member be an adult or a child. Members over sixty years of age must pay an entrance fee of 5*s.*, and patients who are ill at the time of entrance must pay an entrance fee of 10*s.* 6*d.* to the medical officer in charge of the case. Female patients are not entitled to benefit during confinement or for diseases arising therefrom. Attendance at confinement can be arranged for privately, and patients suffering from diseases arising from intemperance or immorality are not eligible for the benefits of the service. A collector was appointed at a salary of £1 a week and a 10 per cent. commission on all collections exceeding £6 10*s.* per week. Every medical officer had to give £2 on joining the service, and render himself liable for £3 more, if required. Finally, and so as to exercise a control in respect to medical ethics, Rule 14 states :—

"That the Committee of Management shall have power, by a two-thirds' majority, to expel from the service any member who, they may consider, has been guilty of infamous practice in a professional sense."

The definite formation of this public medical service was greatly stimulated by the issue of a handbill, which clearly showed how impossible it was to hope for effective reform of the Coventry Provident Dispensary. As typical of the spirit animating the committee of that institution, the handbill is worth quoting. It reads as follows :—

"Important Notice.—To all those connected with the Coventry Dispensary.—Owing to the splendid success of the institution certain outside medical men are trying to coerce the Dispensary Committee to fix a wage limit for membership, and raise the rate of pay for children. The impracticability of the first is self-evident, while the latter would inflict great hardship on those who have to support large families. While every office is adequately paid and there is a large balance in hand it is undesirable and unnecessary to adopt such suggestions or allow any outsiders to usurp the powers that rightly belong to the members. A resolution will be submitted at the annual meeting to be held at St. Mary's Hall on Wednesday next, the 26th inst., at 8 o'clock in the evening, which practically amounts to a declaration of independence, claiming that the pecuniary position of any applicant for membership shall in future be no bar to admission. Assert your independence by attending and supporting the resolution."

The meeting in question was held in April, 1893. The Mayor of Coventry was in the chair, and he boasted that the dispensary had a balance in hand of from £5000 to £6000 worth of property; he did not, however, say anything about the balance in the hands of the medical men, whose skill and labour had built up this property. Mr. G. A. Bray moved a resolution to the effect that pecuniary position should be no bar to membership. He urged that the time had arrived when "they should definitely and for all time fix their status." He therefore moved :—

"That this meeting resolves that as the dispensary is now a self-supporting institution the pecuniary position of any applicant for membership shall in future be no bar to admission."

Mr. Errington, in seconding the resolution, wished to "make the fact quite clear that in that institution the members paid for what they had," and repudiated the idea of the dispensary being a charity. "There were among the dispensary members men who had been mayor; the committee ballot-box was made by Aldermann Marriott when he was a carpenter, and did these think they were in receipt of charity at any time?" Mr. J. Bill said that he did not agree, and this was the first time after many years that he was in disagreement with the dispensary committee. He thought the pride of rich men should prevent their claiming the medical benefits, but "had they not got absolute evidence to the contrary in the letters to the newspapers? Here was a gentleman coming forward—and he honoured him for his courage—and declaring that he could afford the ordinary medical fees of the outside doctors, but he came here because he thought he was entitled to come." Was the "basis of payment at the dispensary fitted for a rich man"? It was low expressly so as to admit the poor. The institute was founded in a spirit of benevolence. "If they removed that they removed one of the best and strongest supports of the institution. He differed from the proposer of the resolution in this particular: if they let the rich in the poor would be crowded out. It was ridiculous to tell him that the man who said he could pay 5*s.* or 2*s* 6*d.*, but chose to pay 2*d.* or 3*d.* for a doctor's visit, was a man he ought to honour." Mr. Pears, the only surviving member of the original committee, wrote that the institution was based on philanthropy, and "it was always the desire of the committee, when I was a member and could attend it, to keep *strictly* to the principles of its foundation." The original founders' committee had not only said that the rich people should be excluded, but, Mr. Bill added, they "promised that extra care should be taken to exclude them. ....." "Another point was that the institution possessed £5000 worth of property which was bequeathed to the 'Benevolent and Provident Dispensary.'"

The word 'benevolent' was at the head of it, and that property was left to the institution in that character." Such property was not bequeathed to rich men, yet Mr. Daffern had said, "Not only can I afford to employ a medical man, but I am told that there are scores of people in better positions than myself." Mr. Daffern replied that he joined thinking it was a self-supporting institution and not a charity, and denounced the "impudence" of those medical men who called it a charity. The medical staff was paid. The outside practitioners wished to deny them the benefits of coöperation. It was scandalous to call it a pauperising institution. Canon Beaumont and Dr. Fenton thought the resolution was uncalled for, but were so lukewarm in their half-hearted support of Mr. Bill's opposition that the resolution was carried by an overwhelming majority, only about six hands being held up in opposition. Thus in a most emphatic and public manner was it proclaimed that wealthy persons should not be debarred from joining the dispensary. The discussion also clearly shows that the charitable nature of the medical work is not recognised. Yet if we accept the minimum fee for a consultation at 1*s.* 6*d.*, and if, as stated by Mr. Bill, the medical staff received only about threepence per visit, they make a present of 1*s.* 3*d.* to the institution every time they see a patient. Nevertheless, these patients have the audacity to think that because they pay 3*d.* out of the minimum fee of 1*s.* 6*d.* they are not in receipt of charity. In this respect it is curious to note that when the institution was first established a meeting of the medical men of Coventry was held in this self-same hall (St. Mary's Hall) on July 29th, 1829. Dr. Bourne was in the chair, and the following resolution was carried:—

"1. That this meeting regrets, after a full consideration of the subject, that they cannot approve of the establishment of a self-supporting dispensary in this city, the principles of which, they think, are not adapted to the locality of Coventry. 2. That this meeting would most cordially coöperate with their fellow citizens in establishing a charitable dispensary upon the usual terms of such institutions."

This opposition caused the scheme to remain in abeyance for a while, but in October, 1829, a meeting, under the presidency of the Rev. W. F. Hook, was held, and drew up rules similar to those now in force, except that some restrictions were placed upon the class of person to be admitted to membership. In consequence of the opposition of the profession the self-supporting idea remained in abeyance. Fifteen months later it was decided to incorporate a charitable element. At another public meeting the medical men again opposed a self-supporting dispensary, wisely foreseeing that "the system was open to abuses," and again offering to support a charitable institution. Nevertheless, the committee, while seeking to conciliate opposition, persisted in promoting the self-supporting principle. The medical men, therefore, boycotted the institution and refused the appointments offered to them. The dispensary was obliged to import two medical men—namely, Dr. Nankivell and Dr. Bicknell—who entered upon their functions on June 20th, 1831. At an early date the institution had more than 2000 members. The membership was originally limited to 2500—a very wise rule, as this is not too large a number for a couple of medical men, and differs very remarkably from the 26,000 members mentioned in 1892 as being under the care of only five medical men. After some years these early and wise resolutions were abandoned, and the abuses foreseen by the medical profession so far back as the year 1829 were realised to the full.

(To be continued.)

MANCHESTER.

We have been requested by the honorary secretary of the Manchester Medical Guild to publish the following resolution which was recently passed by the Guild:—

"Having had its attention drawn to the conduct of a 'Dr. Wallace, a graduate of Glasgow,' who (as reported in the *British Medical Journal* of May 29th) has allowed himself to become the agent of a medical aid association at Penge and Beckenham in direct opposition to the expressed wishes of the local profession, the council of the Medical Guild at Manchester desires to place on record its emphatic condemnation of such conduct as this gentleman's, not only as derogatory in itself and indicative of deplorable absence of *esprit de corps*, but also as subversive of the true interests of the public and the profession."

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Workhouse Milk.

QUESTIONS as to the adulteration of milk are continually arising, and the conclusions reached are almost as frequently unsatisfactory in consequence of the various standards adopted by analysts, differing as they so often do from that allowed by the authorities at Somerset House. This was illustrated by an unsuccessful prosecution the other week at Manchester. Samples of milk supplied to the Chorlton Union Workhouse at Withington were examined by Dr. W. C. Williams, one of the assistant county analysts. The first showed 3·22 per cent. of fat and 7·68 per cent. of non-fatty solids. Genuine milk should contain at least 8·5 per cent. of solids other than fat. The second sample showed 2·57 per cent. of fat and 8·32 per cent. of solids other than fat. The third sample showed upwards of 10 per cent. of added water and 7·64 per cent. of non-fatty solids. For the defence it was urged that though probably below the standard of some local authorities, it was not lower than that allowed by the authorities of Somerset House. The presiding magistrate said "the bench had carefully considered the evidence, and, after looking at the analysis, and having considered the variations in the results of analyses by different people they had come to the conclusion that the milk in this case had not been adulterated." It is surely time that the limits of normal variation in the composition of milk should be more clearly defined.

Whitsuntide in Manchester.

In the north of England Whitsuntide is the great holiday of the year, and nowhere is it observed more enthusiastically than in and about Manchester. The great flower show at the botanical gardens, Old Trafford, draws exhibitors and visitors from all parts of the country; the theatres and other places of amusement, such as the Belle Vue Gardens—with their zoological collections and spectacular displays of fireworks—attract thousands of visitors. Perhaps, however, the processions of the children from the various Sunday schools is the feature most characteristic of the people and the place. Monday is devoted to the Church of England schools, represented yesterday by a gathering of more than 24,000. On the other days the scholars attending the schools of other denominations march in procession. In addition to this, almost all the schools organise excursions to places more or less distant, or picnic in fields in the suburbs. If the weather is good, all goes well, but if it rains "they take their pleasure sadly." More thought seems now to be given to the protection of the children from exposure and undue fatigue than used to be the case, but unfortunately the long excursions to Llandudno and such far away places are more popular than shorter ones, so that a very early start has to be made, and in some cases midnight has approached before the children—the younger ones asleep or weary and irritable—have got back to Manchester. "A Whit week *fête* and gala" is being held in Trafford-park, with a varied programme of entertainments, but yesterday several thousands of people had the good taste to find their principal pleasure in rambling amongst the woods and in the meadows of the inner park. This is arranged for by the "syndicate" and not by the city council which lost the park for the people of Manchester.

Artificial Filters for Sewage Purification.

In a report submitted to the Mersey and Irwell Joint Committee, last week, Sir Henry Roscoe said the adoption of artificial filters for the treatment of sewage was a move in the right direction, especially in the case of large towns, where it was difficult to obtain a sufficient area of suitable land for sewage purification. He said that the trials, extending over seventeen months, of filters made both of cinders and coke for the Manchester Corporation, had been satisfactory. The effluent submitted to filtration had previously been treated with milk of lime and copperas. An acre of filter could deal continuously with about 800,000 gallons per day. "It remains, however, to ascertain how long these filters will work satisfactorily before requiring renewal of a part or the whole of their contents, and this is a cardinal point." To obtain the data required to show if they were efficient for dealing with large

populations he advised the Rivers Committee of the Manchester corporation to carry out artificial filtration on a much larger scale than they had done.

District Nurses for Cheetwood, Higher Broughton, and Kersal.

A public meeting was held recently, Alderman Walmsley, M.R.C.S., J.P., &c., being in the chair, under the auspices of the Manchester and Salford Sick Poor and Private Nursing Institution, to consider the advisability of engaging two nurses for the above district. The chairman was supported by the Bishop of Manchester, the clergy and the ministers of various denominations, as well as by the local medical practitioners and other gentlemen. The institution is affiliated with the Queen Victoria's Jubilee Institution for Nurses. It is hoped that two trained nurses may be engaged by public subscription at a cost of £170 a year. From the feeling manifested at the meeting there is little doubt that this modest but useful enterprise will be carried into effect.

June 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Jubilee Day Arrangements in Edinburgh.

IT is hardly necessary to say that the medical classes will not meet on June 22nd. The Royal College of Surgeons of Edinburgh has issued invitations to a Reception at Surgeons' Hall in the afternoon. This, so far as I have heard, is the only medical gathering of a formal kind for which arrangements have been made.

Glasgow University.

The final examination for degrees in medicine and surgery commenced on the 7th inst.; there are 133 entrants, including 11 women candidates. The degree of M.D. has been conferred on Mr. Thos. F. Tannahill, M.B., C.M. Professor McKendrick has been awarded the MacDougall-Brisbane prize by the Royal Society of Edinburgh in recognition of his published researches in connexion with sound and the phonograph.

Faculty of Physicians and Surgeons, Glasgow.

Mr. Edwin Arthur Gibson, M.B., C.M. Glasg., having passed the necessary examinations and been elected by ballot, has been admitted a Fellow of the Faculty.

Medical Appointments.

Mr. Maitland Ramsay, M.D. Glasg., has been elected Professor of Ophthalmology in St. Mungo's College, and Ophthalmic Surgeon to the Glasgow Royal Infirmary and Ophthalmic Institution. Mr. Jas. Henderson Nicoll, M.B., C.M. Glasg., has been appointed consulting surgeon to the Glasgow Hospital and Dispensary for Diseases of the Ear. The following appointments are intimated at the Glasgow Royal Infirmary: W. K. Hunter, M.A., M.D. Glasg., to be physician to the dispensary, and W. J. M. Slowan, M.B., C.M. Glasg., to be extra-dispensary surgeon.

Important Scotch Law Case as to Disinfection.

In Aberdeen Sheriff Court the local authority for the city under the Scotch Public Health Acts petitioned the court for a warrant to take bedding from the residence of a householder to the town council's disinfecting station for purposes of disinfection, three cases of measles having occurred in the house. The judge (Sheriff Substitute Robertson), while admitting that the air or steam method of disinfection is the most effectual if properly applied, held that the provision and use of disinfecting chambers are permissive under the present Public Health (Scotland) Acts, and found, besides, that the householder had disinfected with sulphur fumigation and exposure to sunshine, in accordance with the advice of the family medical man and of a circular issued by the Board of Supervision in 1874, which has not been superseded. The Sheriff Substitute has therefore dismissed the petition and allowed the householder 5 guineas of modified expenses. It may be added that the Public Health (Scotland) Bill now before Parliament proposes to give local authorities compulsory powers in such matters. In the law case referred to an appeal to a higher court is not possible.

Aberdeen Corporation Sea-bathing Station.

Contracts have now been entered into for extension of the baths pavilion, the total of the tradesmen's offers being £7207 odd. New terraces have been laid out at the seaside, the accesses for vehicles and pedestrians have been improved, and an additional number of trees have been planted on the Links (or downs) adjoining.

Aberdeen Hospitals.

Miss Lumsden, hon. superintendent, Royal Infirmary, has resigned. The juvenile patients in the City Hospital are to be entertained on Jubilee Day.

A Donation.

Mr. J. C. Wordie, Oriental Club, London, has, through Dr. Hunter Mackenzie, given a second donation of £100 to the Eye, Ear, and Throat Infirmary, Edinburgh.

June 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

AT a meeting of the Fellows held on Monday, June 7th, for the election of president, vice-president, council, and secretary for the ensuing year the following were elected:—President: William Thomson, F.R.C.S. Vice-President: Robert Lafayette Swan, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: Archibald H. Jacob, F.R.C.S., Edward Hallaran Bennett, F.R.C.S., Henry Gray Croly, F.R.C.S., Sir Philip Crampton Smyly, F.R.C.S., Sir William Stokes, F.R.C.S., Henry Rosborough Swanzy, F.R.C.S., Sir Thornley Stoker, F.R.C.S., William Ireland Wheeler, F.R.C.S., Austin Meldon, F.R.C.S., D.L., Sir Charles A. Cameron, F.R.C.S., L. Hepenstal Ormsby, F.R.C.S., Richard D. Purefoy, F.R.C.S., Charles Bent Ball, F.R.C.S., Henry Fitzgibbon, F.R.C.S., Arthur Henry Benson, F.R.C.S., Francis T. Heuston, F.R.C.S., Thomas Myles, F.R.C.S., John Lentaigne, F.R.C.S., and George M. P. Murray, F.R.C.S.

Royal College of Physicians of Ireland.

At the meeting of the Royal College of Physicians of Ireland, which took place on the 4th inst., Dr. James Craig, of the Meath Hospital, was elected to the post of Registrar to the College, vacant by the death of Dr. Guy L. Nugent.

Irish University Education.

Professor Leitch, D.Lit., D.D., the new Moderator of the Irish Presbyterian Church, in his opening address on June 7th made an extremely important pronouncement on the vexed question of Irish university education. Referring to the educational disadvantages under which Presbyterians in Ireland had laboured in the past, and to the destruction of the late Queen's University, and to the fact that the Royal University established in its place was a mere examining board (which therefore necessarily failed to fulfil one of the chief functions of a university) in which Presbyterians were not fairly recognised, he said that if a separate Catholic university was established then the Presbyterian Church might in fairness demand that they should have another university for themselves, with all the privileges which the Protestant Episcopal Church enjoyed in Trinity College, Dublin, and which the Roman Catholic Church will have in their university. Professor Leitch thought such a solution of the question, although a fair and justifiable one, would be disastrous to the best interests of Ireland, as it would tend to sectarianise her education by giving a separate university to each of the three chief religious denominations, because that education which ought to liberalise and unite the people in their national, intellectual, and social life, would become an instrument for widening and deepening and perpetuating those differences by which already they are so unfortunately separated. If the Roman Catholics will be satisfied with nothing but a Catholic university, then Professor Leitch advocated the establishment of one great Protestant university in which all denominations would be united on equal terms, and he thought this might be done by the reconstruction of the government of Dublin University (Trinity College) so that Presbyterians should have an adequate share in it; the affiliating to it of another college or colleges which would be on a level with Trinity College and endowed and equipped commensurately with it; and the making of other financial arrangements with Trinity College which such changes would necessitate. In this way there would be in Ireland a university, like Oxford and Cambridge, composed of a number of colleges, where the most healthy rivalry would prevail. The question is, Would

the authorities of Trinity College consent to such a re-arrangement of their university? If they would not, and if the Roman Catholics demand a Roman Catholic university, fully equipped and endowed, then nothing is left for the Presbyterian Church but to claim that whatever privileges and endowments are given to Roman Catholics in the university established for them, the same shall be given to Presbyterians in a third university founded for that body. Such is the scheme put forward by the head of the Presbyterian Church in Ireland, one of her most distinguished professors, and himself a Senator of the Royal University of Ireland. A great deal can be said for and against such a plan for settling the Irish University education question; but the Government, in announcing their intention of devoting a part of next session to Local Government in Ireland, have probably shown that for the present the education problem must be shelved. They are no doubt wisely waiting until the principal parties concerned put forward practical schemes for consideration.

Monaghan Dispensary.

At a special meeting of the Monaghan Dispensary Committee, held on June 3rd, Dr. Henry was unanimously appointed medical officer in place of Dr. Dunwoody, resigned.

The New Victoria Hospital.

The subscriptions to the new Victoria Hospital amount now to about £94,000, so that it is hoped that before Jubilee Day the required sum (£100,000) will be obtained. The arrangements about the Charter of the new hospital and as to its probable site are at present under discussion.

A Local Government Board Inquiry.

Dr. Browne, Local Government Inspector, held an investigation at Lismore with regard to a singular charge brought by a man named Tobin against Dr. R. J. Baylor, the dispensary medical officer of the district. The charges were to the effect that on April 5th Dr. Baylor was drunk when attending Tobin's wife in her confinement, and that on the same occasion he brought into Mrs. Tobin's room a commercial traveller named Appleby and introduced him as a naval medical officer. The midwife in her evidence stated that Dr. Baylor appeared to be drunk, and that from the demeanour of Mr. Appleby in the sick-room she suspected at the time that he was not a medical man. Some of the women who were in the house when Dr. Baylor arrived corroborated the statement of the midwife, that Dr. Baylor introduced Mr. Appleby as a naval surgeon, and expressed their opinion that Dr. Baylor was drunk that night. On the other hand, Dr. Baylor swore positively that he was not drunk, and that as a matter of fact he had taken only two bottles of stout on the day in question. Furthermore, he stated that at the time he believed Mr. Appleby to be a medical student and that he would not have allowed him to accompany him if he thought otherwise. Three witnesses who saw Dr. Baylor that evening swore that he was quite sober. Mr. Appleby, in the course of his evidence, stated that he had never been a medical student, but that he had studied chemistry and had told Dr. Baylor that he had a great taste for the medical profession and hoped some day to be a medical man. He believed Dr. Baylor misunderstood what he said and took him to be a medical student. He also swore that Dr. Baylor was sober. Mrs. Tobin's evidence was then taken. She stated that Dr. Baylor was drunk, and that she heard him introducing the commercial traveller as a naval medical officer when they got into the kitchen. Whilst describing the incidents of the night the poor woman appeared completely overcome with emotion, and before her evidence was completed she fell fainting from the witness chair. Dr. Browne forwarded his report to the Local Government Board, and their decision was communicated to the Dispensary Committee last week. They found Dr. Baylor guilty on both charges and called on him to resign, intimating at the same time that if he should fail to do so they would dismiss him from office by sealed order.

June 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Development in the Medical Use of the X Rays.

AT the meeting of the Academy of Medicine last week M. Combe communicated an ingenious application of skiagraphic methods to the bones of the face. He hangs a delicate photographic film, which has been carefully preserved from contact with the light, upon an artificial palate modelled in vulcanite exactly to the oral cavity of the subject. This, when placed in the mouth, can be maintained in position by the closure of the jaws. The rays from the bulb are directed perpendicularly on the region it is desired to photograph, the exposure being from six to eight minutes. The tube employed is a bi-anodic bulb giving a spark of 45 c.m. The skiagrams obtained showed, among other things, the anterior part of the superior maxillary bone, in which the roots of the incisors and canine teeth were very clearly visible, and in the substance of which the least tumour would have become obvious. Another curious development in x ray photography has been obtained by Messrs. Luys and David, who have exhibited at the Biological Society some skiagrams representing what they term "effluves" given off by the eye and finger in the normal condition, and their results will have much interest for occultists and dabblers in electro-biology. Messrs. Luys and David have employed a new method, which had, however, already been mentioned by Dr. G. Le Bon. It consists in the immersion of the fingers of the subject in an hydro-quinone bath, the fingers being applied by their palmar surfaces to a plaque of gelatino-bromide of silver in the dark for some quarter of an hour or twenty minutes. As a result the observers believe thus to have demonstrated that there emanates normally and continually from the human body during a state of wakefulness a special fluid which they consider "the essential manifestation of life." This phenomenon is similar to that which Colonel Rochas has recently sought to demonstrate under the name of "externalisation of sensibility." To the imaginative all sorts of possibilities will present themselves as the result of the study of this "essential manifestation." By watching the variations of this nerve force taking place in accordance with the age, sex, different times of the day, different environments, and different mental conditions, assistance may be gained in the study of physiology and pathology, while the absence of "les effluves" may possibly furnish that sign for which so many are now looking—an incontrovertible proof of death.

The Toxicity of Human Perspiration.

At the Biological Society also M. Arloing has reported some interesting observations on this subject. He found as a result of making intravenous injections of natural perspirations and also of prepared extracts of the same that when the strength of the injection approached fifteen centimetres per kilogramme in the case of the dog, and twenty-five centimetres per kilogramme in the case of the rabbit, death almost always occurred, generally within three days, though sometimes not for some weeks, when it followed upon a state of profound cachexia. The injection of one-sixth, one-quarter, or one-third of the lethal dose led, according to his observation, to immediate and proportional effects. The toxicity varied with the environment of the subject which furnished the perspiration as well as with the mode of preparation of the extract. The perspiration secreted during arduous muscular toil is richer in toxic principles than that secreted during the ordinary circumstances of life, the degree of extra malignancy amounting to 25 or 30 per cent. All things being equal, perspirations obtained by artificial means of sudation present a minimum of toxicity, but perspiration obtained from a subject who has suffered from retention of the secretion due to cold is poisonous.

The Microbiology of Hospital Wards.

M. Netter communicated at the same meeting of the Biological Society the result of some important researches which he has made and which have revealed the presence of virulent pneumococci in the dust and wards and walls of hospitals. He has collected and examined the dust upon a wall at a point corresponding to the back of the bed of the patient, and over a surface which could not have been directly affected by the coughing of the sick. The dust was collected on April 22nd upon pledgets of cottonwool. On May 19th one of these pledgets was washed with care in sterilised water and the resulting deposits were centrifugalised. The diluted specimen was then used for the inoculation of three young guinea-pigs, two in the peritoneum, and the third in the cellular tissue also. The first subject died on May 25th; the one which had been inoculated at the same time in the peritoneum and the cellular tissue died on May 26th, and both presented all the symptoms of a general fibro-purulent peritonitis. The serous fluids of the body of each contained organisms exactly

resembling pneumococci, and cultures in gelatin and in bouillon confirmed the presumption drawn from the appearances.

The Hospital Treatment of Parturient Women.

At the Municipal Council the facilities have been discussed for prolonging the sojourn at the hospitals of women who have been accouched and who are at the present time, except in the case of puerperal illness, compelled to be sent away at the end of ten days with their infants. One establishment alone exists in the environments of Paris, l'Asile Ledru-Rollin, where women can obtain shelter during their convalescence. But this asylum contains only sixty beds, and is consequently altogether insufficient for the wants of the class for which it is provided. M. Colly proposed to increase the duration of the legal sojourn at the maternity hospitals after accouchement. M. Strauss preferred to increase the accommodation at the Ledru-Rollin Asylum. A new maternity hospital is about to be built in connexion with l'Hôpital St. Antoine, and a certain number of beds will be provisionally reserved there for convalescents. A new hospital is going to be constructed also in the south-west of Paris as a result of the enterprise and generosity of the proprietor of one of the largest shops in Paris—the Bon Marché. The hospital will be called the Hôpital Boucicault, after the name of its foundress, and will take gratuitous care of the employés of the Bon Marché as well as of all other sick people who can pay their expenses there. It will be officially opened by the President of the Republic on July 13th.

Professional Responsibility.

A medical man has, I regret to state, been condemned at Paris to two months' imprisonment and a fine of 500 francs for *homicide par imprudence*. His patient died as a sequel to an operation for the removal of a fibroma which had been undertaken without proper precautions.

June 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"Pro Silvis."

THE reafforesting of Italy is one of the most momentous problems before her legislature. The new "legge forestale" (forestal law) has been under examination by a special commission, which has approved its provisions "in massima" (in the main), but not without suggested modifications to ensure its effective working, particularly in the matter of regulated tree-felling. This latter provision has heretofore been honoured more in the breach than in the observance, and what wonder, when the miserable pay of the officers told off to enforce it is taken into account. Inspectors, who go about in pairs and are each mounted, are empowered to patrol the wooded districts, and if they come upon a man felling a tree to demand the certificate authorising him to do so. Their salary amounts to 40 lire a month (about 30*s.* in English money at the current exchange), out of which they have to keep their horse. It has been found that to eke out their scanty pay they are often tempted to ignore the tree-feller's failure to produce the certificate and to share the proceeds of the illegally utilised timber. The law has in many places become a dead letter in consequence of those irregularities, and its revision in the direction of greater stringency is imperative. The whole question is, as I have said, a momentous one, in which (characteristically enough) those chiefly interested are medical men. Now that the late elections have given so many of them a seat in Parliament we may expect a more vigorous, as well as a more thorough, promotion of the long-neglected reform. The classic treatise on the subject is, indeed, of medical authorship. "Pro Silvis: Elementi di Economia Naturale basati sul Rimboscamento" ("A Plea for the Woods: Elements of Natural Economy based on Reafforesting")—such is its title. Its writer was the late Dr. Arnaldo Cantani, Professor of Medicine in the Neapolitan School, a physician and bacteriologist in advance of his time, whose public services in fields allied to that of the healing art procured him his seat in the Italian Senate. Italy, he points out, is essentially an agricultural country, finding her chief source of revenue in the soil, a solid revenue, moreover, not of the factitious kind "which fortuitous circumstances may create or undo." The historic retrospect he gives of the fate of the woods which, in Virgil's time, were among the "praises of Italy" is at once most interesting and most melancholy, the denudation of the hillsides being primarily due to causes, manufacturing and domestic, which, now that she has become a limited kingdom and a "great power," may be expected to increase rather than diminish. How little she realises the extent of the bane and the nature of the antidote may be inferred from the fact that she has but one school of forestry, and that a very backward one—the school at Vallombrosa in Tuscany. In Germany, in Austria, in Switzerland, and in a less degree in France, the agricultural population are taught to balance the tree-felling process by that of planting and cultivation—a knowledge rare in Italy even among her landed proprietors. It is, however, the medical aspects of the reckless clearing away of forest growth, with its atmospheric results and the climatic changes, down to the causation of the floods, which every autumn become a national visitation, that lend the subject now before Parliament its most far-reaching and permanent interest. I hope the Di Rudini Administration will give practical proof of its mastery of the lessons so powerfully driven home by Dr. Cantani, whose work is quite an armoury for those of his medical co-legislators, who are the paladins of this sanitary, economic, and patriotic crusade.

"An Incredible Scandal."

The words are not mine. They are those of an Italian publicist in commenting on the Commission of Inquiry which has recently reported to the Chamber of Deputies on the "fatti dolorosi, enormi, incredibili" (sad, hideous, incredible facts) revealed in the administration of the Foundling Hospital at Naples. This hospital, or "Brefotrofio," as it is called, is, I am sorry to say, a specimen—though an exceptionally ghastly one—of the many institutions of the kind established in the great centres of population where the large celibate communities of both sexes, accommodated in religious houses, are the cause of illegitimacy on an enormous scale, the hapless offshoots of which find their way as "foundlings" into the said hospitals, where, if they are not "killed outright," they can hardly be meant to live. The mortality thus occasioned has long been a scandal, though it has seldom, if ever, attained the total given by the Commission of Inquiry in its report on the Neapolitan "Brefotrofio." In the last two statistical years the foundlings admitted into that institution were 856, and their deaths at the close of 1896—the second of those two years—amounted to 853! In other words, the survivors of the "system" were, all told, three! That something hideously wrong prevailed throughout the management of the "Brefotrofio" as a whole had long been more than suspected. The "corpo sanitario" (sanitary authorities) of Naples made repeated attempts to get at the truths officially veiled, but all in vain. There was reason to know that every hygienic law in the institution was "honoured in the breach," not "in the observance"; that the dormitories were positively foul with untidiness and neglect; that the management made absolutely no provision for "sale d'isolamento" (isolation rooms) on the frequent outbreak of infectious or contagious disease; that no addition was made to the wet nurse service when the foundlings were admitted in larger numbers; that, for instance, one nurse was allowed to give the breast to as many as four infants per diem; that the hot-water boiler was unknown in the building; and that the baby linen was as filthy as it was deficient, seldom renewed, and still more seldom washed. Nor is this all. The Commission of Inquiry reports that the milk (cow's or goat's) was never sterilised; that the feeding-bottles were never disinfected, and that a stop was put to the dispensary from which medicines and sick-room necessaries were gratuitously supplied to the out-door nursing service. Worse still remains to be told. In order to relieve the institution of its tiny inmates—as if death did not complete its task quickly enough—the management (so says the Report) trumped up against those of them who had reached seven years of age charges of insubordination or other offences grave enough to relegate them to houses of correction! "Thus," comments the Cavaliere Perrone, chairman of the Commission, "by condemning the child to associate with young thieves and lawbreakers recruited from the worst classes, you bring about his 'civil death,' in the rare event of his having succeeded in escaping 'natural death.'" And so, from the first page to the last, the Report accumulates proof upon proof of criminal violation of all the rules that ought to control such institutions, while the debate it evoked

in the Chamber of Deputies on the 2nd inst—a debate headed in the parliamentary reports, "Gli Orrori del Brefotrofio di Napoli" (The Horrors of the Naples Foundling Hospital)—drew from several speakers the demand that the "administrators" should be prosecuted to conviction. These "functionaries" have all resigned, and the Minister of Grace and Justice has undertaken that they and their conduct shall come before the tribunals.

The Italian Karlsbad and its Chief Promoter.

Attention has from time to time been drawn in these to columns Italy's wealth in mineral waters, and particularly to those of the Tuscan Monte Catini, known as the "Italian Karlsbad," for their efficacy in hepatic disorders and in the initial phases of gout. Next to the name of Fedeli, the most honourably associated with Monte Catini has of late years been that of Federici, to whom the thermal establishment owes many substantial and enduring services. That eminent physician, who held one of the clinical chairs in the Florentine school, died in 1892, when a full account of his career was given in THE LANCET.[1] On Sunday, May 30th, a commemorative tablet, inserted in the façade of his house in Florence, was unveiled in the presence of a large concourse of the public, professional and lay, the medical schools throughout the kingdom being nearly all represented, and the spokesman of the occasion being his successor in the Direction of Monte Catini and in the Florentine chair, Dr. Pietro Grocco, the acknowledged head of Tuscan medicine. The text of Professor Grocco's speech is now before me, and I need only say of it that it is equally honourable to its subject and to its author. The Italian intellect at its best never appears to greater advantage than in the medical field, whether in enlarging the scientific horizon or in adding to the resources of practice. Cesare Federici was one of those worthy successors of Baglivi and Morgagni, Rasori and Nobili, who have left indelible traces on the evolution of the healing art, and his example was effectively utilised by his successor as a stimulus to the medicine of young Italy to follow the same independent and painstaking line. A few more leaders of his stamp, and the ground she has lost since the Renaissance would be not only retreived but extended, to the development of her professional efficiency all round and especially of her resources in balneary methods of treatment wherein her native advantages have hitherto been inversely to her energy in utilising them.

June 5th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

The Budapest Humane Society.

A MEETING was held on Sunday last in the new town hall of Budapest, the occasion being the tenth anniversary of the foundation of this society. The meeting was honoured by the presence of H R.H. the Archduke Joseph, the patron of the Humane Society, and by his Excellency M. Wlassics, Minister for Public Instruction. The Mayor of Budapest, Count Lamezan, the President of the Vienna Humane Society, and most professors of the medical faculty were also present. The Budapest Humane Society was founded ten years ago by the philanthropist, Chevalier S. Falk, Count A. Andrássy, and its present director, Dr. G. Kresz, and has since risen from small beginnings to an organisation which brings help and comfort to thousands whose lives are in jeopardy. During last year the society was called upon in 13,251 cases. The whole number of cases in which its assistance had been resorted to during the ten years of its existence amounts to 81,315. The society has also done very good work in establishing and organising similar institutions in the larger provincial towns of Hungary, such as Kolozsvár, Székesfehérvár, Szabadka, and Nagyvárad.

The First Hungarian Lady Doctor.

Last week Countess Hugonnay took the degree of M.D. of Budapest University. She completed her medical curriculum and graduated as M D. in Switzerland some years ago, but was not allowed to practise in Hungary, because, according to law, foreign degrees—save those of Austria—cannot be entered in the Hungarian Medical Register. She had, therefore, to pass the final examinations of Budapest University, and I understand that she will practise in Budapest as an obstetrician and gynæcolcgist.

Long Forceps (Axis Traction) versus Turning.

Dr. St. Tosh has published out of the rich material of Professor Tauffer's Obstetrical Clinic a series of cases in which he employed long forceps instead of turning. The conclusions he drew in his very elaborate paper were the following: — 1. The use of the forceps at the inlet of the pelvic cavity is not so hazardous as is still believed by many writers, and is decidedly more favourable to both mother and child than internal podalic version. 2. In all cases where speedy delivery is required for the safety of the mother and version is not applicable the axis traction forceps should be tried before resorting to perforation. 3. In cases of moderately contracted pelvis long forceps are to be preferred to turning, because by thus waiting the expulsive powers have a chance to complete labour spontaneously. 4. Should the forceps at the inlet prove of no success, then perforation is to be performed at once. Symphyseotomy may under favourable circumstances prove to be the right proceeding, but internal podalic version is decidedly contra-indicated in these cases. 5. Axis traction forceps of different lengths may be used, but Dr. St. Tosh prefers Tarnier's instrument.

June 3rd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrims and Quarantine.

DR. ARMAND RUFFER the new President of the International Quarantine Board of Egypt, has just returned from the pilgrim camp at Tor. In order to be prepared for the influx of returning pilgrims he had established a large staff of European and native medical men, some of the latter having been temporarily lent by the School of Medicine here. For the first time, also, an Englishman is being employed there, Mr. Chilton. Orders were given that during the three days' quarantine, which every pilgrim is obliged to undergo at Tor, all cases of diarrhœa should be viewed with suspicion and examined bacteriologically. On May 24th, as a matter of routine, a miserably sick man moribund from kidney disease was so examined. The medical officers who conducted the necropsy declared their conviction that it could not possibly be a case of cholera. Yet microscopical examination of the fæces revealed the typical comma bacilli, which were so familiar a year ago in Cairo to some of the workers now at Tor. In some other cases of diarrhœa, among the living and the dead, bacilli of cholera could not be discovered; while, on the other hand, they were found in some cases where diarrhœa was not a prominent symptom. So far cholera bacilli have been found in eight pilgrims during the last week, though the telegraph reports that there were no fresh cases yesterday. Now all these cases of comma bacilli were similar, and all behaved in the same way to various tests employed. For instance, the suspected substance gives the indol reaction with sulphuric acid added to peptonised bouillon, and the addition of cholera serum to an emulsion of the organism produced a flocculent precipitate. Yesterday as a further proof Dr. Symmers and Dr. Bitter inoculated three guinea-pigs with material brought from Tor. All three died within six hours, their temperature falling within three hours after injection from 99·2° F. (two) and 101·5° to something below 95°, which the thermometer could not register. To-day, again, three more guinea-pigs were inoculated with a fatal dose of the bacillus, together with varying quantities of cholera serum (Pfeiffer); but the result of this is not yet known. This is the case for cholera: much diarrhœa, a few deaths, and unmistakable bacilli found in eight patients. The arguments against cholera are that the bacilli are not yet corroborated by clinical, pathological, or epidemiological evidence. So far, it is said, there is an absence of vomiting, cramps, cyanosis, and rice-water stools, and the intestines of the dead are found filled with bile-stained fæces. Dr. Zachariades, who is in medical charge of Tor, has seen three cholera epidemics there, and firmly denies that the present disease is cholera. This is based upon his own clinical opinion, but it is interesting to remember that he was the medical man who in 1895 reported that cholera was then existent at Tor. His French colleague was unable to find any

[1] THE LANCET, June 4th, 1892, p. 1278.

bacilli. The Quarantine Board in Alexandria supported the bacteriologist and gave no credence to the clinical report. Officially there was no cholera at Tor in 1895, and yet the disease was introduced about that time into Egypt and remained in the country till October, 1896. Up till now the Quarantine Board has declared the present pilgrimage to be "clean," but it is difficult to see how they can now avoid declaring it "unclean." In this latter case all existing and future pilgrims will be kept at Tor for ten days after the last case. By decision of the various congresses a pilgrimage must be in one of these two categories—it cannot be classed "suspect." By declaring it "unclean" some inconvenience would be caused to quarantine officials and to about 2000 pilgrims, but, on the other hand, Egypt would very likely be saved from another outbreak of cholera. Cholera always has entered Egypt from Hedjaz, though it has never been discovered at the time. Also, it must be remembered that cholera has often been at Tor, as in 1890 and 1891, without the disease entering Egypt. Past history tells us that when the quarantine officials have recognised cholera and treated it energetically Egypt has not been attacked. On all occasions when Egypt has suffered from cholera the enemy has been allowed to penetrate the first line of defence without question. At this crisis we may congratulate ourselves that Dr. Ruffer is at the head of the Alexandria Board and that he happened to be inspecting Tor last week.

Unruly Pilgrims.

A few days ago a temporary rising took place at Tor among pilgrims, who naturally demurred at any extension of their quarantine. One of their grievances is that they have to supply themselves with food during their imprisonment in camp. At the time of this rising eighty Egyptian soldiers were guarding 5000 Turks. To any one who knows the two races this is like setting a sheep to watch the dogs. Now the guard has been doubled, and what is obviously wanted is an English officer in command.

Cairo, June 1st.

Obituary.

ROBERT MUNDY GOVER, M.D. ST. AND., F.R.C.P. LOND.,

LATE H.M. MEDICAL INSPECTOR OF PRISONS.

WE regret to have to record the death of Dr. R. M. Gover, which took place at Falmouth on the 5th inst. Dr. Gover was in the active discharge of his duties until July of last year, when illness compelled him to take leave of absence, and to go to the south of England in search of health. It had been noticed for some time that his health was not good, but it was hoped that rest and change would restore him, and that he would soon be able to resume his duties. Unfortunately these hopes proved fallacious, the desired improvement did not occur, and in December last he felt obliged to place his resignation in the hands of the Secretary of State. The news of his death will come as a shock to his friends, and more particularly to those who were associated with him in the work of the prison department. Dr. Gover qualified as M.R.C.S. in 1856, and L.S.A. in 1859. He became M.R.C.P. in 1876, M.D. St. Andrews in 1882, and F.R.C.P. Lond. in 1883. He joined the prison service at Portsmouth in 1857, and was transferred as resident surgeon to Millbank Prison in 1860. A few years later, in 1865, he succeeded to the full medical charge, and held the position until appointed to the Home Office in 1878. Millbank during his tenure of office there was one of the most important prisons in the country, and his post was no sinecure. He had to deal with all sorts and conditions of criminals, and he became familiarised with all aspects of criminal life. Not only were ordinary offenders confined within the walls, but there was a department for military prisoners, and it was the custom to send lunatics, imbeciles, and epileptics from other prisons for observation and report. The requirements of this large and varied population, their diseases and weaknesses, their excesses and "breakings out," their malingering and grumbling, all kept him busy, and he had not time to contribute much to contemporary literature. Many pertinent observations and valuable suggestions regarding the connexion between lunacy and crime are, however, to be found in his annual reports. The experience thus gained proved of great value to him in the discharge of his more important duties as medical inspector. He was appointed to this post in 1878, a year memorable in the history of prisons, as it was then the local prisons came under the Crown. The transference from the local authorities to a central board of so many large institutions was a work of considerable magnitude, and one requiring the exercise of great tact and discretion. Dr. Gover shared in the work, for there were many medical points which had to be dealt with. One of the most important of these was the introduction of a uniform scale of diet in all the prisons of England and Wales. This subject was submitted to a committee, of which Dr. Gover was a leading member. He displayed great interest in the subject, and published his views in a paper read before the Society of Arts in 1873. During the whole of his career as medical inspector, about eighteen years, the question of prison dietary frequently occupied his time and attention, and he introduced improvements wherever practicable. On many other questions affecting the well-being of prisoners—e.g., the treatment of weak-minded and imbecile criminals, the management of infectious diseases in prisons, &c., he has left traces in the orders which are issued for the guidance of the officials. He had frequently to advise the Home Secretary and the high prison officials in matters of difficulty and delicacy. He gave important evidence before the Commission which inquired into the subject of criminal lunacy in 1880, and he appeared as a witness before the Commission of Inquiry regarding the management of Prisons in 1896. He contributed papers on the treatment of criminal lunatics and weak-minded prisoners to the Paris Penitentiary Congress in 1895. Dr. Gover's manner was gentle and unassuming, and his courtesy and affability were constant. He was held in much esteem by the medical staff of the prison department, and they cannot but regret the loss of one who, as far as lay in his power, upheld their interests and invariably proved a good friend and a kind chief.

JOSEPH LAW, M.D. EDIN., L.F.P.S. GLASG.

DR LAW, of Sheffield, who died at his residence in Devonshire-street at the great age of ninety years on June 1st, was a veritable link with the past. He was a native of Sheffield, where his family had long been established. His medical education was received at Trinity College, Dublin, and at Edinburgh University, and he became a Licentiate of the Faculty of Physicians and Surgeons of Glasgow as long ago as 1831. He returned to Sheffield, and about 1836 obtained the appointment of house surgeon at the dispensary in West-street, where he remained until, in 1841, he became house surgeon at the general infirmary in succession to Dr. Ernest, who died after more than thirty years' tenure of office. After eleven years' service as house surgeon, during which he was frequently complimented by the governors at the annual meetings, Dr. Law resigned his position, returned to Edinburgh in 1853 for the purpose of taking his M.D. degree, and thereupon established himself in practice in Sheffield. In 1854 he was elected physician to the dispensary and in 1866 physician to the infirmary. On his resignation of the latter appointment in 1876 he became consulting physician, and on his final retirement in 1890, forty-nine years after he had first become connected with the institution, he was presented with a portrait of himself, which was hung in the infirmary board-room. Another portrait of him, executed in 1892, hangs in the Medical School. Dr. Law outlived his wife and his early associates, and witnessed many changes in medicine and surgery. He will be regretfully remembered by numerous friends and acquaintances, to whom his sincerity and goodness of heart endeared him.

THE CIVIL RIGHTS DEFENCE COMMITTEE: PUBLIC MEETING AT PLYMOUTH.—By the help of the members of the Plymouth Medical Society and other medical men in Plymouth both political parties have combined to form an influential committee drawn from the towns of Plymouth, Devonport, and Stonehouse, which committee has convened a meeting to be held on June 14th to receive a deputation from the Civil Rights Defence Committee and hear an address from Mr. R. B. Anderson.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The Examiners in Medicine for the Third M.B. Examinations in the ensuing year are: Dr. L. Humphry, Dr. Foxwell, Dr. S. Martin, F.R.S, and Dr. Mitchell Bruce. The Examiners in Surgery are: Mr. Bernard Pitts, Mr. Bennett, Mr. Watson Cheyne, F.R.S, and Mr. Golding-Bird. The Examiners in Midwifery are: Dr. J. Phillips and Dr. Cullingworth.—Dr. Haddon has been granted £300 from the Wort's Travelling Scholars' Fund for an anthropological expedition to the Torres Straits.—The Rev. Professor Wiltshire has presented his valuable geological library to the Woodwardian Museum.—Professor Michael Foster has been appointed representative of the University on the Council of the Marine Biological Association.

THE ROENTGEN SOCIETY.—The first meeting of this society was held on June 3rd, at the rooms of the Medical Society, Chandos-street, London, W. The chair was taken by Professor Silvanus P. Thompson. The business included passing of laws, election of forty-four original members, and the appointment of an executive. The following is a list of officers chosen:—President: Professor Silvanus P. Thompson, F.R.S. Vice-Presidents: Professor Ferrier, F.R.S., Dr. J. H. Gladstone, F.R.S., Dr. John Macintyre, Mr. C. W. Mansell Moullin, and Mr. Fletcher Moulton, Q.C., F.R.S. Honorary Member: Professor Roentgen. Council: Dr. Mackenzie Davidson, Mr. F. E. Fenton, Mr. J. E. Greenhill, Dr. W. S. Hedley, Dr. F. H. Low, Mr. T. Moore, Mr. Sydney Rowland, Mr. A. A. Campbell Swinton, Mr. W. Webster, F.C.S., Dr. Norris Wolfenden, and Mr. Snowden Ward. Secretary: Dr. David Walsh.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The following scholarships, medal, and prizes were awarded during the summer session 1896 and winter session 1896–97:—Livingstone Scholar: Mr. C. J. Mercier. Huxley Scholar: Mr. F. B. Pinniger. Epsom Scholar: Mr. L. C. Badcock. University Scholars: Mr. H. S. Clogg and Mr. R. J. Willson. Huxley Medal and Prize of £10: Mr. A. G. Pitts. Golding Prize: Certificate and £10, Mr. C. J. Mercier. Pereira Prize: Certificate and £5, Mr. S. W. Garne. Anatomy (Senior): Prize, Mr. A. G. Pitts. Anatomy (Junior): Prize, Mr. A. G. Payne. Biology: Prize, Mr. F. B. Pinniger. Chemistry: Prize, Mr. C. J. Mercier. Physiology (Senior): Prize, Mr. A. G. Pitts; Prize (Special), Mr. B. A. Nicol. Physiology (Junior): Prize, Mr. D. Gray. Medicine: Prize, Mr. H. S. Clogg. Surgery: Prize, Mr. E. L. Lilley. Practical Medicine: Prize, Mr. W. H. Unwin. Materia Medica: Prize, Mr. M. G. Hannay. Osteology: Prize, Mr. F. M. Boclet. Practical Chemistry: Prize, Mr. F. R. Bishop. Psychological Medicine: Prize, Mr. V. S. Partridge. Midwifery: Prize, Mr. S. W. R. Colyer. Pathology: Certificate, Mr. W. H. Park. Public Health: Prize, Mr. S. H. Berry. Therapeutics: Prize, Mr. H. W. Abbott. Practical Midwifery (Summer): Prize, Mr. A. E. Weld. Practical Midwifery (Winter): Prize, Mr. W. E. Morgan. Dental Surgery: Prize, Mr. W. Green.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—The annual meeting of the Western Branch No. 1 of the London and Counties Medical Protection Society was held on May 27th at Southerton House, Hammersmith, by permission of its President, Dr. Alderson, who took the chair. After the annual report was read and approved, Dr. Heron, treasurer of the society, said that during the past twelve months there had not been any important legal proceedings, but a very large amount of important business had passed through the society's office. With regard to the subject of hospital abuse Dr. Heron was of opinion that abuse did exist to a material extent, for over 1,300,000 people received assistance every year in the out-patients' department alone of the London hospitals. Put into other words, this meant that almost every fourth person one met in the streets of London was a recipient of hospital charity. In Dr. Heron's opinion the remedy for this state of affairs lay to a large extent in the hands of the medical profession in London; and if they did not help themselves they could not expect other people to help them in their difficulties. He also thought that medical men should give up dispensing medicines, and then, but not, he thought, till then, they would be in a position to take action in the matter of prescribing by druggists. As regarded the conduct of medical defence, Dr. Heron stated that he had always held it should be carried out by one large and powerful society, but he had not heard of any scheme which was likely to lead to this being efficiently done in the near future. After some remarks from the chairman and others the meeting closed with a vote of thanks to Dr. Alderson for presiding.

A MEDICAL MAN'S JUBILEE.—An interesting occasion was the celebration at Esher some fortnight ago of Mr. Izod's jubilee. Mr. Izod, who has been in practice for fifty years at Esher, gave two entertainments in aid of the Prince of Wales's Hospital Fund, and bade the members of the local Fire Brigade and the stewards of the entertainments to dinner afterwards, when the proceedings were of an enthusiastic character.

A DAY OF REST FOR LONDON NURSES.—On Thursday, June 3rd, the nurses of the metropolitan hospitals and nursing institutions were invited by Canon Burnside to spend a day in the country at Hertingfordbury. The object in view was not only to afford some relaxation from work, but to exalt the Christian aspect of the ministry of nursing. There was a large attendance. The day commenced with a celebration of the Holy Communion in the parish church at 10.30. The Bishop of Wakefield was celebrant, and was assisted by Rev. W. Ostle, chaplain of St. Bartholomew's Hospital; Rev. A. G. Locke, chaplain of St. George's Hospital; Rev. H. J. Fase, chaplain of Westminster Hospital; and the Rector. At luncheon time the nurses were well entertained, and in the afternoon, by the kindness of the Countess Cowper, the whole party was invited to Panshanger, where they took tea, and afterwards had the opportunity of seeing the beautiful collection of pictures and strolling through the gardens and park on their way home. The Rev. A. G. Locke, of St. George's Hospital, acted as secretary in making all arrangements for the journey of the nurses from London. Looking back upon the day it was generally felt that, the main object being steadily kept in view, the opportunity had been most helpful in deepening in the mind of many a higher sense of the dignity of the nurses' calling, whilst the recreation and enjoyment of such a visit to the country had tended in no small measure to lighten the strain incidental to a nurse's work.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Poor-law Officers Superannuation.

THE House of Commons has passed through all its stages a Bill to amend the Poor-law Officers Superannuation Act of 1896, so that nurses may signify their intention not to avail themselves of the provisions of that Act, and thus retain intact their salaries or wages, and stand entirely outside the scheme of superannuation.

Infant Life Protection Bill.

This Bill having passed the House of Lords is now in the House of Commons, where it has been put down for second reading on Thursday, June 17th.

Scotch Public Health Bill.

The Grand Committee of the House of Commons on Law completed the consideration of the Scotch Public Health Bill on Thursday, June 3rd, and on the same day the Bill as amended by the Committee was reported to the House by Sir James Fergusson. The Bill in this form will now be printed, so that every one interested may see exactly what the Committee has done, and prepare for the report stage in the House, which has been provisionally fixed for Thursday, June 17th.

HOUSE OF COMMONS.

THURSDAY, JUNE 3RD.

Lights after Dark.

Mr. Melville asked the Secretary of State for the Home Department whether his attention had been called to a verdict of manslaughter given in the case of a bicyclist who was killed at Stockport by a cart driven at night without lights? And whether he would be prepared to introduce a Bill to enforce the carrying of lights and prevent similar accidents in the future?—Sir Matthew White Ridley said his attention had not been called to the case otherwise than by the hon. Member's question, but he was afraid he could not undertake to bring in a Bill. The matter, however, was already before the House, for a Bill providing that all vehicles should carry a light after dark had been discussed and read a second time. Under the existing law borough and county councils had ample powers for dealing with the matter by means of by-laws, powers which in many cases had been exercised.

Flogging Prisoners.

Mr. Joseph A. Pease addressed questions to the Home Secretary and the Under-Secretary for War with reference to flogging in civil and military prisons, and received an assurance from these two Ministers that more information on the subject will be forthcoming.

The Vaccination Question.

At this sitting a Bill was introduced and read a first time "to amend

the vaccination laws by providing a compulsory supply of calf lymph under Government control and for other purposes." The Bill is backed by Mr. Carlile (who introduced it), Sir Cameron Gull, Mr. Bemrose, Mr. Howell, and Mr. Wanklyn. The second reading of the measure has been put down for Wednesday, July 7th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for Wellesbourne, vice R. Pitt, resigned.

BAYLISS, R. A., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Royal Mineral Water Hospital, Bath.

BENSON, H. T., L.R.C.P. Lond., has been re-appointed Medical Officer for the Maxey Sanitary District of the Peterborough Union.

BROWN, HERBERT, M.D. Lond., F.R.C.S. Eng., has been appointed an Honorary Medical Officer for the East Suffolk and Ipswich Hospital, vice G. Hetherington, resigned.

CRAGG, W. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed an Honorary Assistant Surgeon to the Sydney Hospital, New South Wales.

CRAIG, JAMES, M.D., F.R.C.P. Irel., has been appointed Registrar to the Royal College of Physicians of Ireland, vice Guy Nugent, deceased.

CUTHBERT, JOHN, L.R.C.P. Edin., L.K.Q.C.P. Irel., L.R.C.S., has been appointed Health Officer to the Victoria-park Local Board of Health, Western Australia.

DAWSON, H. T., M.B., Ch.M. Aberd., has been appointed a Public Vaccinator, Pahiatua District, New Zealand.

DIXON, T., M.B., Ch.M. Edin., has been appointed an Honorary Physician to the Sydney Hospital, New South Wales.

ELLIS, H. D'ARCY, L.R.C.P. Edin., M.R.C.S., had been appointed Medical Officer of Health by the Kingswinford Rural District Council.

FARMER, P. W., M.B., Ch.B. Melb., has been appointed Resident Medical Officer and Public Vaccinator for the Urban and Suburban Districts of Wyndham and the Rural District of East Kimberley, and Quarantine Officer at the Port of Wyndham, Western Australia.

FIASCHI, T. H., M.D., Ch.D. Pisa, has been appointed an Honorary Surgeon to the Sydney Hospital, New South Wales.

GILL, JAS. M., M.D. Lond., L.R.C.P., M.R.C.S. Eng., has been appointed an Honorary Assistant Physician to the Sydney Hospital, New South Wales.

GITTINGS, C. B., M.B. Lond., has been appointed Resident Medical Officer to the St. Marylebone General Dispensary.

GOWING, B. S., M.R.C.S., has been appointed Vaccination Officer for Stockbridge, of the Wortley Union.

HARVEY, WILLIAM, L.R.C.P., L.R.C.S. Edin., has been appointed Resident Government Medical Officer to Hall's Creek, Kimberley Goldfields, Western Australia.

HAVELOCK, JOHN G., M.D. Edin., has been appointed Physician-Superintendent to the Royal Asylum, Sunnyside, Montrose.

HAWTHORNE, ERNEST S., L.R.C.P., L.R.C.S., L.M. Irel., has been appointed Surgeon to the Etheridge District Hospital, Georgetown, Queensland.

HEARNE, W. W., M.B. Melb., has been appointed a Public Vaccinator for Outtrim, Victoria, Australia.

HENRY, JAMES, M.D., M.Ch. Dubl., L.M.K.Q.C.P. Irel., has been appointed Medical Officer and Medical Officer of Health for the Monaghan Dispensary District of the Monaghan Union.

HEPWORTH, A. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Acting Public Vaccinator for Euroa, Victoria, Australia.

HIRSCH, CHARLES T. W., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Divisional Surgeon to the Police of R Division stationed at Woolwich and to the Police of Woolwich Division stationed at the Royal Arsenal, Railway Plant Depôt, and Woolwich Dockyard.

HOWDEN, JAMES C., M.D., has been appointed Consulting Physician to the Royal Asylum, Sunnyside, Montrose.

HUSBAND, J. C. R., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Workhouse and for the No. 2 Sanitary District of the Ripon Union.

JACKSON, H. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to the Royal Berkshire Hospital, Reading.

JOHNSTON, J. C. M.B., Ch.M. Edin., has been appointed Acting Medical Officer for Port Phillip and Superintendent of the Quarantine Station, Point Nepean, Victoria, Australia.

MACLENNAN, ALEX., M.B., C.M. Glasg., L.M. Dub., has been appointed Resident Medical Officer to the Hospital for Women, Soho-square, W.

MCDONNELL, JOSEPH, L.R.C.P. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Roscommon Dispensary District.

MORETON, CHARLES PEYTON, M.R.C.S. Eng., L.S.A. Lond., L.M. Dub., has been appointed Poor-law Medical Officer for the Berriew District and Medical Officer of Health to the Forden District of Montgomeryshire, North Wales, vice F. W. Waters and W. D. Thursfield, resigned.

OLDMEADOW, J. H., M.R.C.S. Eng., has been appointed a Member on the Board of Advice for the New Norfolk School District, Tasmania.

PICKFORD, J. S., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health by the Little Lever Urban District Council, vice A. Taylor, deceased.

PLAYER, C. R., M.B., Ch.B. Melb., has been appointed Officer of Health for Bulla Shire, Victoria, Australia.

POPE, R. JAS., M.D. Edin., F.R.C.S. Edin., has been appointed an Honorary Ophthalmic Surgeon to the Sydney Hospital, New South Wales.

ROBERTSON, J., M.D. Edin., B.Sc. (Pub. Health), has been appointed Medical Officer of Health for Sheffield.

ROSS, W. S., M.B., Ch.B. Dub., has been appointed a Public Vaccinator for the District of Waiapu, New Zealand.

RUDALL, JAS. F., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed a Public Vaccinator for Foster, Victoria, Australia.

SHACKEL, G. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Ludlow Rural District Council, vice W. M. Thursfield, resigned.

SKINNER, GEO. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Public Vaccinator for Mitawa, Victoria, Australia.

SKINNER, W. A., M.B., C.M. Edin., has been appointed Junior Assistant Medical Officer to the Royal Asylum, Montrose.

SYLVESTER, HERBERT M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Leiston-cum-Sizewell Urban District Council.

THOMAS, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed a Public Vaccinator for the Pleasant Point District, New Zealand.

THORNE, MARY, L.S.A. Lond., M.D. Brux., has been appointed Senior Resident House Surgeon to the New Hospital for Women, Euston-road, vice Miss Keith.

THORP, ALBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wooldale Sanitary District of Holmfirth.

TOMLINS, WM. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Government Medical Officer and Vaccinator for Lower Richmond, New South Wales.

TOWNEND, R. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Cumberworth Sanitary District of the Huddersfield Union.

TYTHERIDGE, W. R., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed a Public Vaccinator for the Halcombe District, New Zealand.

WATSON, G. G., M.B., Ch.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Acting Officer of Health for Borung Shire, Victoria, Australia.

WEBB, A. B., M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Meredith, Victoria, Australia, and Public Vaccinator for Steiglitz, Victoria.

WHEELER, L., M.B., B.S. Irel., has been appointed Acting Superintending Medical Officer of the Lunatic Asylum, Freemantle, Western Australia.

WRIGHT, T. N., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Public Vaccinator for the District of Waihi, New Zealand.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District £100 per annum; for the Port Sanitary District, £20 per annum, and as Medical Attendant at the Sanatorium £30 per annum. Applications to the Town Clerk, Lowestoft.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CHORLTON UNION.—Senior and Junior Resident Medical Officers at the Workhouse Hospitals, Withington, Manchester, for twelve months. Salary of the former at the rate of £130 per annum, and of the latter at the rate of £120 per annum, each with furnished apartments and attendance (but not rations) in the Workhouse. Applications to the Clerk to the Guardians, Chorlton Union Offices, All Saints, Manchester.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

COUNTY BOROUGH OF ST. HELENS.—Medical Officer of Health, Public Analyst. Salary £400 per annum, rising by five equal annual instalments to £520 per annum. Preference will be given to candidates qualified to act as Public Analyst, an office to which an additional salary of £75 per annum will attach. Applications to the Town Clerk, Town Hall, St. Helens.

FISHERTON ASYLUM.—Locum Tenens for about six weeks. Three guineas weekly, with board, lodging, and washing. Applications to Dr. Finch, The Asylum, Salisbury.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital. An honorarium of £10 10s., will be given conditionally.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—Surgeon and Anæsthetist to Out-patients. Applications to the Secretary, at Harrow-road.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary £80 per annum, with board, lodging, and washing.

NEW HOSPITAL FOR WOMEN, Euston road, London.—Medical Women as Clinical Assistants in the Out-patient Department, for one year.

NOBLES, ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon, single. Salary £90 per year, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed Medical Attendant at the House of Industry at a salary of £10 per year.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C.—House Physician for six months. Board, &c., provided. No salary.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Salary £50 per annum, with board and lodging. Stimulants and washing not provided.

SHAFTESBURY UNION.—Medical Officer and Public Vaccinator for the Shaftesbury District. Salary as District Medical Officer £70 per annum, to include all extras, with certain exceptions, and the usual fees for vaccination. Deductions will be made under the Poor-Law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, Shaftesbury.

SHAFTESBURY UNION.—Medical Officer for the Shaftesbury Union Workhouse. Salary £35 per annum, to include all extras, with certain exceptions. Deductions will be made under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, Shaftesbury.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary 60 guineas per annum, with board (exclusive of wine and beer) and lodging.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Professorship of Surgery.

UNIVERSITY OF ABERDEEN.—Two Examiners for graduation for four years. Applications to the Secretary, University of Aberdeen.

WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vael District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

Births, Marriages, and Deaths.

BIRTHS.

BROCK.—On June 5th, at Via Veneto, B. Rome, Italy, the wife of G. Sandison Brock, M D., of a son. (South African papers please copy.)

CARR.—On June 7th, at 19, Cavendish-place, W., the wife of J. Walter Carr, M D., M.R.C.P., of a daughter.

DYMOTT.—On June 6th, at Dunkeld, Birdhurst-road, South Croydon, the wife of Donald F. Dymott, M.B. Lond., M.R.C.S., of a daughter.

FEATHERSTONE.—At Ballandalloch, Blackheath, on Sunday, June 6th, the wife of J. A. Featherstone, M.B., C.M., Warrender-park-road, Edinburgh, of a son.

JOHNSON—On June 7th, at Weymouth-street, W., the wife of Raymond Johnson, F.R.C.S., of a daughter.

MCELLIGOTT.—On June 1st, 1897, at Belper, Derbyshire, the wife of Maurice Gerald McElligott, L R C P I , L R.C S , &c., of a son.

ROMER.—On June 5th, at 27, Harrington-gardens, S. Kensington, the wife of Frank Romer, M.R.C.S., L.R C P., of Malmesbury, Wilts, of a daughter.

RUFFER.—On June 7th, at Ramleh, Egypt, the wife of M. Armand Ruffer, M.A., M.D., of a daughter.

SANDALL.—On May 31st, at Alford, Lincolnshire, the wife of T. Edward Sandall, B.A., M.B., B.C. Cantab., of a son.

SMYTH.—On June 7th, at Abingdon-villas, W., the wife of Surgeon-Captain W. Johnson Smyth, M.D., attached to Grenadier Guards, of a daughter.

THOMSON.—On May 31st, at 34, Queen Anne-street, W., the wife of H. Campbell Thomson, M.D., of a daughter.

WILLIAMS.—On May 31st, at Portmadoc, the wife of Walter Williams, M B., of a son.

WYBORN.—On June 3rd, at Camden-road, N., the wife of Walter E. Wyborn, M R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

APLIN—PRESTON.—On June 3rd, at St. Nicholas's Church, Nottingham, Alfred Aplin, Medical Superintendent of the Nottingham County Asylum, to Arundel, younger daughter of the late Martin Inett Preston, Nottingham.

CESAR—RUSSELL.—On June 1st, at the Parish Church, Neston, by the Rev. J. O. Young, assisted by the Rev. Canon Turner, Vicar of the parish, Augustus Kirwan Adelmare Cæsar, L.R.C P., L.R.C.S., L.S.A., of Ladywell, eldest son of Richard Thompson Cæsar, M R.C.S., of Maidstone, to Helen, eldest daughter of the late David Russell, M.D., of Neston, Cheshire.

GAMGEE—WILLIAMS.—On June 3rd, at St. Mary's Church, Cardigan, by the Rev. D. G. Phillips, Rector of Cilrhedyn, cousin of the bride, Leonard Parker Gamgee, F.R.C.S., of Birmingham, to Margaret, second daughter of David Griffith Williams, of Ayron House, Cardigan.

LEWER—BUSHE.—On June 1st, at St. Mary's Church, Donnybrook, Dublin, Edward Stewart Lewer, M.B. eldest surviving son of Surgeon-Major-General R. Lewer, A.M.S. (retired), of St. Margaret's, St. Edward's-road, Southsea, to Olive Margaret, only daughter of C. Percy Bushe, of St. Joseph's-terrace, Sandford-road, Dublin.

NANCE—MARSHALL.—On June 1st, in the Parish Church, Croft-on-Tees, Henry Chester Nance, F.R C.S., of Norwich, to Mary Dorothea, daughter of the Rev. J. M. Marshall, Rector of Croft.

NEWNHAM—BELOE.—On June 9th, at St. Mary Redcliffe, Bristol, W. H. C. Newnham, M.A. and M.B. Cantab., of Chandos Villa, Clifton, to Kathleen Mervyn, second daughter of W. C. Beloe, of Comynge-road, Clifton, Bristol.

WEBB—LIZARD.—On June 3rd, at St. Luke's, Battersea, by the Vicar, the Rev. Canon Erskine Clarke, Chaplain-in-Ordinary to the Queen, William Henry Webb, M.D., of Kingsbridge, South Devon, to Maud Lizard, daughter of the late Thomas Edwin Lizard, of Coombe-fishacre, South Devon. (No cards.)

DEATHS.

BLAKE.—On June 6th, at Bedford, Ethelbert Henry Blake, M.D. Edin., late Deputy Inspector-General of Hospitals, aged 78.

GOVER.—On June 5th, at Cliff-road, Falmouth, Robert Mundy Gover, M.D., F.R.C.P., late H.M. Medical Inspector of Prisons.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (19th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40 Leicester-square, W.C.).—8 P.M. Annual Meeting: Election of Officers. Paper:—Dr. J. E. Grevers (Amsterdam): Notes on Various Forms of the Articulation of the Upper and Lower Teeth (illustrated by lantern slides).

WEDNESDAY (16th).—NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (14th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Impaired Movements of the Vocal Cords.

TUESDAY (15th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Pemphigus and Allied Affections.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Clinical Demonstration.

WEDNESDAY (16th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Infectious Diseases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. A. Whitfield: Differential Diagnosis of Sore Throats.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Mr. Godlee: Surgical Lecture.

THURSDAY (17th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Methods of Search for Specific Micro-organisms.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Sprue, Tropical Sore Mouth, and Diarrhœa.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. A. Eddowes: Ringworm and Favus.

FRIDAY (18th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Hemiplegia.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"AN UNUSUALLY HEAVY HEART."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 29th, p. 1466, Dr. G. A. Reid gives an account of a heart which weighed 41 ounces, and two others of 31 ounces and 31½ ounces. He quotes two other cases, one by Delafield and Prudden of 50 ounces and one by Dulles of 48 ounces. He then says, "So far as I can ascertain from the literature on the subject at my disposal no other heart over 40 ounces in weight has been recorded." If he will refer to Taylor, fourth edition, p. 434, he will find one of 48 ounces, and in Osler, second edition, p. 665, he will find one of 53 ounces.

I am, Sirs, yours truly,

Wandsworth, June 3rd, 1897. A. S. MORTON.

THE AUDITOR AND THE WATER DIVINER.

THE Local Government Board auditor, in disallowing the amount of a payment made to a water diviner by the urban district council of Ampthill, Bedfordshire, said that there was no legal objection to the making of experimental borings under competent advice, but no proof that the water diviner possessed special knowledge had been submitted to him, and he held it to be illegal for the council to spend money on speculative enterprises. It was stated that Mr. Leicester Gataker, the water diviner, walked slowly over the ground with his arms spread out, and indicated the position of a spring by stopping suddenly as if he felt a shock. The chairman of the council informed the auditor that in this way a number of springs were found in one field, but on the other hand some dissatisfied ratepayers argued that the spot selected by the diviner was not likely to yield water as the underlying stratum was a bed of clay of great thickness.

Dr. J. Laird.—It would be a great pity to start a newspaper correspondence on such a subject. All such discussions impair the public utility of the profession. The matter is one for discussion between the parties, when facts might be elicited that would give a different appearance. A third medical man known to both should be made a medium of interchange of views, and, if possible, be given the power of an arbitrator.

"WANTED A SURGICAL PHIDIAS!"

To the Editors of THE LANCET.

SIRS,—With reference to the letter referred to in the enclosed cutting from the *Church Family Newspaper*, may I venture to take your correspondent quite *au sérieux*, and say that if he will put himself in correspondence with me, I will guarantee to remove his dissatisfaction without any charge.

Like himself I am a thorough believer in all that surgery can do; and though I do not profess to alter his physiognomy either by any series of surgical operations or in a day, I shall only be willing to undertake his case on condition that he gives to me the "readiness to suffer considerable pain," and his willingness "to run a fair amount of risk" which he offers to fantastic surgery.

One so seldom comes across a soul in earnest, that when such a *rara avis* turns up one's desire is to put his earnestness to the test and to foster a courage by no means contemptible.

You, Sirs, inserted this letter with apologies and a smile; will you accept mine on the same terms? While I assure you that my offer is neither that of a quack nor a catch-penny, I enclose my name for our dissatisfied friend should he write and ask you for it, and to assure you of my *bona fides*, and can only say that with such coöperation as he offers there is no reason whatever to doubt that his face may yet become, in spite of all its defects, the face of an angel.

I am, Sirs, yours faithfully,

June 8th, 1897. EARNEST PHYSICIAN.

*** In accordance with our correspondent's desire, we insert, apologise, and smile.—ED. L.

Curious.—There are by-laws in some of the Colleges which would preclude trading. Permissible or otherwise, such trading is objectionable.

THE ABUSE OF TOBACCO.

THE French Society for the Prevention of Excess in Tobacco, to which we referred in an annotation in THE LANCET of June 20th, 1896, p. 1734, continues to flourish exceedingly under the fostering care of its president, M. Decroix, and its general secretary, Dr. Gélineau. At a recent meeting for the distribution of prizes, which was somewhat incongruously held in the Horticultural Hall, Paris, under high patronage, including that of M. Steeg, inspector-general of public instruction, the funds in hand were said to exceed 90,000 francs, included in this handsome sum being 2000 francs from the president, who regularly devotes his savings as a pensioned veterinary surgeon to the extinguishment of tobacco smoke. The name of Dr. Gruby, who not only presided at the last annual meeting but also offered a prize to the deviser of the best method for breaking a tobacco-chewer of his expectorant habit, is absent from the proceedings on the last occasion, but we sincerely trust that this is not due to any backsliding on his part. The tenets of the society are still as remarkable as ever by reason of their moderation. Being people amenable to reason, the anti-tobacconists recognise the fact that adult mankind is not to be coerced in the matter of the divine weed. The correction of grown-ups being admittedly hopeless they confine their propagandism to the rising generation, and seek to safeguard the innocent babes in the primary schools by revealing to them the awful abysses that are supposed to yawn beneath the, at all events fragrant, pall emitted by countless cigars and pipes. To this end a prize was offered for the best practical means of preserving infancy from the contamination of tobacco, but although a M. Géry, a schoolmaster, was proclaimed the winner and duly crowned as anti-nicotian laureate, the essay upon which he rode to fame has not been reproduced. In like manner a reward of 300 francs was promised some time ago to whomsoever should make known the influence of tobacco on the action of internal medicaments as well as on the cicatrisation of external wounds, but, unfortunately, in this case too we are left in the dark regarding the result. In the course of the proceedings two announcements may, in theatrical parlance, be said to have brought down the Horticultural Hall. The first, by M. Steeg, was an assurance that the ministerial mind was in sympathy with the society; the second, by Dr. Gélineau, was to the effect that in future the bicycle would be employed as a powerful opponent of tobacco.

Killochridge should apply for information to Dr. A. G. Bateman, secretary to the Union, at the offices 20 and 21, King William-street, Strand, W.C.

INCUBATORS.

To the Editors of THE LANCET.

SIRS,—Could some of your correspondents give me any information as to where incubators for babies could be procured in England, and their approximate cost either to purchase or hire?

I am, Sirs, yours faithfully,

June 8th, 1897. H. G. C.

*** Our correspondent will probably be able to obtain the information he requires at the Earl's Court Exhibition. (Vide THE LANCET, May 29th, 1897, p. 1490.)—ED. L.

"THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—I suppose your correspondent "Examiner" wishes us to infer that he is one in authority at this examination. If he is it is a pity he has no apologies to offer but only flippant remark and subtle sneer. He is astonished at candidates' impudence in expecting to be provided with the usual apparatus, but he is willing to waste their time over unnecessary mental arithemetic. "Examiner" will be surprised to hear "N.D." and "W. T." were considerate enough not to exhaust the catalogue of deficiencies—for instance, to mention that in practical bacteriology thirty candidates had only six or seven oil immersion lenses between them, and these attached to old pattern microscopes without coarse adjustment, and so on. However, I refuse to think that "Examiner's" letter is typical of the attention a candidate's reasonable criticisms will meet with at Cambridge, but I even venture to hope that the letters of "N.D." and "W.T." will prompt the syndicate to improve the laboratory equipment.

I am, Sirs, yours faithfully,

June 8th, 1897. W. T.

*** The letter to which our correspondent refers was signed Examinee, not Examiner.—ED. L.

To the Editors of THE LANCET.

SIRS,—Your correspondent "Examinee" cannot have had my letter before him when he penned his letter to you or he would have learned from it that I did not fail in laboratory work as he seems to infer. It was the paper in bacteriology which did for me. To repeat the substance of my letter, I complained of the damaged condition of the oil immersion microscope and its being placed in the centre of the room on an uneven zinc-covered table. I believe there was a vacant room adjoining with abundance of light where the microscopes might have been placed. In the second place I had a special paper on bacteriology, which I had not before when I scored enough marks for a pass in this subject only. This time I was informed I had marks to spare in hygiene, which, had the questions on bacteriology been included with those on the general subject as before, would no doubt have totalled sufficient for a pass in the whole of Part I. Your correspondent will perhaps now understand that I responded successfully to the tests on the laboratory work. If I had not had a course of instruction in such work I dare say I could not have done as well as I did. I quite agree with him in his remarks on the letter of "W. T.," as I had nothing to complain of as regards the arrangements in the chemical laboratory, except the waiting for reagents. I think it, however, bad taste to crow over us because he has passed and we have failed. Everybody knows, and persons of experience in examining students will corroborate the statement, that many good men are ploughed at an exam., and others not so well informed generally, but crammed with knowledge imbibed specially for the purpose of getting through the examination, fortunately for themselves do so.

I am, Sirs, yours truly,

June 5th, 1897. N. D.

General Practitioner.—The general practitioner should have been advised as to the situation by the family. It is not in accordance with professional etiquette for the consultant to take over the general practitioner's patient, but perhaps he has not done so or perhaps he has done so in error. He should be asked in a friendly way what has happened. We do not attach much importance to the solicitation of a subscription, nor does our correspondent say that the consultant knew him to be also a supporter of the charity.

"PASSING RICH ON FORTY POUNDS A YEAR."

THE Hampstead board of guardians appear to place little value on medical services. It is humiliating to read in a daily contemporary, which we trust has been misinformed, that last week they decided to apply to the Local Government Board for permission to appoint a resident medical officer at the workhouse infirmary at a salary of £40 per annum, with board and apartments. He is to have the double qualification and will be required, in addition to his medical work, to do all the dispensing required for the workhouse. The salaries of other officials at the workhouse are—porter, £30 per annum; superintendent of nursing, £50; master, £60; and matron, £50.

Ethics.—(1) The practice of "touting" implies the employment of a tout, and we do not see any evidence of this. (2 and 3) We think that the publication of our correspondent's name is being used as an inducement to people to ask for information concerning the club, so that its appearance in the advertisement is unfortunate. The fact that the magazine has a small circulation and the club a good object does not obviate the fact that the marked passage is an advertisement.

THE MORAL EDUCATION OF BOYS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers furnish me with the title of a book published some fifteen or twenty years ago on the moral education of boys (in connexion with sexual matters)? If my memory does not deceive me the author was the headmaster of Londonderry School.

I am, Sirs, yours faithfully,

June 6th, 1897. FATHER.

HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I have received the following donations towards the funds of the above Association in answer to the appeal in THE LANCET of last week.

Dr. J. G. Glover	£2 2 0
Mr. D. B. Balding, F.R.C.S. Eng....	1 1 0

I am, Sirs, yours faithfully,

June 9th, 1897. T. GARRETT HORDER, Hon. Secretary.

Lex.—1 and 2. We think that the course indicated by our correspondent would be arbitrary. The legal position under these and similar Acts generally depends upon decisions, and we will inquire what decisions are in existence. 3. For obvious reasons the medical man in charge of the hospital should have the patient under his care. There is no slur whatever in this on the skill of the practitioner. *Vide* THE LANCET pamphlet on "Difficulties under the Infectious Disease (Notification) Act."

"INVERSUS" WOOLLEN UNDER-CLOTHING.

MR. D. GILBERT, of 7, Buckingham Palace-road, London, S.W., has submitted to us samples of his "Inversus" woollen under-clothing, both vests and drawers, in the making up of which, contrary to the usual custom, the smooth surface of the material is placed next to the skin, thus meeting the difficulty of those whose sensitive skins will not permit of their wearing the ordinary woollen garment by reason of its irritating effects. The material of the articles submitted to us is of pure, undyed wool, of exceptional smoothness—in fact, the claim of Mr. Gilbert that it is as "smooth as silk" is, we think, worthy of corroboration, there being an entire absence of those knots and teazles usually met with in woollen under-clothing. The material is manufactured in two substances—(1) thin, for summer wear, and (2) medium thickness, for spring and autumn wear.

Fair Play all Round.—Our correspondent is referred to our report of the proceedings of the General Medical Council in THE LANCET of June 5th, and to numerous articles in our columns and the columns of the medical press generally upon medical aid associations. All that he urges has been said more temperately and therefore more convincingly.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 10th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 4	30·09	N.E.	55	53	105	69	52	...	Overcast
" 5	30·10	N.	58	56	110	75	55	...	Overcast
" 6	30·09	S.W.	63	61	86	74	58	0.05	Hazy
" 7	30·00	E.	62	59	76	65	62	...	Cloudy
" 8	30·03	S.E.	54	52	69	56	52	0·70	Overcast
" 9	29·66	N.E.	52	51	64	54	50	0·10	Raining
" 10	30·08	N.	53	51	90	60	48	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Wolverhampton Chronicle, Kidderminster Sun, Gloucester Chronicle, Craven Herald, Halifax Guardian, Dover Express, Builder, New York Herald, Surrey Comet, Times of India, Pioneer Mail, Tottenham Herald, Scotsman, Brighton Gazette, Birmingham Gazette, East Anglian Daily Times, Somerset County Gazette, Manchester Guardian, Glasgow Herald, Pontefract Express, Whitby Gazette, Brighouse Echo, Sheffield Independent, South Wales Chronicle, Bournemouth Observer, Leigh Chronicle, Liverpool Daily Post, Architect, Harrogate Advertiser, Shrewsbury Advertiser, Rugby Advertiser, Derbyshire Times, Newcastle Journal, Carmarthen Weekly Reporter, Doncaster Chronicle, Hastings Times, Devon Weekly Times, Yorkshire Post, Berrow's Worcester Journal, Sussex Daily News, Bristol Mercury, Chester Chronicle, Chatham News, Western Morning News, Barnsley Independent, Leeds Mercury, Retford News, Sanitary Record, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Mining Journal, City Press, Reading Mercury, Hertfordshire Mercury, Surrey Advertiser, Australasian Medical Gazette, Local Government Journal, Scottish Highlander, Durham County Advertiser, Academy, Keble's Margate and Ramsgate Gazette, National Observer, West Middlesex Herald, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. E. G. Arnold, Birmingham; Messrs. Armour and Co., Lond.; Mr. R. C. Absolom, Blackrock, co. Dublin; Messrs. Arnold and Sons, Lond.; Army Medical Staff, Woolwich, Secretary of.

B.—Mr. E. Stanmore Bishop, Manchester; Dr. O. Beven, Edwinstowe; Messrs. Butler and Co., Liverpool; Rev. F. Burnside, Hertford; Mr. F. Booth, St. Anne's-on-the-Sea; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. F. W. Bateman, Lond.; Dr. P. M. Braidwood, Aylesbury; Dr. G. Butters, Kempston; Mr. E. Burrows, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; B. H., Lond.

C.—Mr. J. Coombs, Bridgwater; Chorlton Union, Clerk of; Mr. R. Cuffe, Woodhall Spa; Messrs. Callard and Co., Lond.; Church of England Society, White Cross League, Lond., Secretary of; Rev. H. A. Cumberlege, Halstead; Messrs. T. Cook and Co., Lond.

D.—Mr. N. Devereux, Tewkesbury; Dr. Ronald Daniel, Chatteris; Dundee Royal Lunatic Asylum, Medical Superintendent of; Mr. L. B. Dhargalka, Bombay; Dorchester Asylum, Medical Superintendent of; Domus, Lond.; Dr. A. Davidson, Liverpool; Mr. J. H. Dewar, Glasgow; Messrs. Dromgoole and Co., St. Helens; Dr. E. Diver, Lond.

E.—Dr. G. J. Eady, Enfield; Dr. A. F. Elliott, Bodmin; Dr. J. W. H. Eyre, Lond.; E. N. H., Lond.; Empire Typewriter Syndicate, Lond.

F.—Mr. W. A. Frost, Lond.; Dr. D. Findlay, Wimbledon; Dr. A. L. Fisk, New York; Mr. W. C. Finch, Salisbury; Messrs. H. Febr and Co., Lond.

G.—Dr. L. G. Guthrie, Lond.; Mr. H. Bellamy Gardner, Lond.; Mr. W. F. Gardener, Lond.; Mr. G. Gresswell, Grimsby; Dr. A. C. Gurney, Blackburn; G. P., Lond.; Messrs. W. H. Guild and Co., Boston, U.S.A.

H.—Mr. F. Rowland Humphreys, Lond.; Haselton, Brighton; Dr. H. Hun, Albany, U.S.A.; Hangchow Mission, Hangchow, China; Mr. W. F. Haslam, Birmingham; Mr. J. Heywood, Manchester; Dr. Alfred Hill, Birmingham; Howard Association, Lond., Secretary of.

J.—Mr. George Jackson, Plymouth; Mr. W. C. C. Jakes, Lond.; Mrs. H. S. Jackson, H.M.S. *Pembroke*, Chatham; Jeypore Museum, Jeypore, India, Hon. Secretary of; Mr. A. H. Jacob, Dorchester.

K.—Mr. J. R. Kibson, Cleobury Mortimer; Dr. W. A. Kidd, Lond.; Mr. A. Kebbell, Flaxton.

L.—Dr. R. R. Leathem, Belfast; *La Medecine Infantile*, Paris, Editor of; Mr. W. W. Leigh, Treharris; Mr. R. A. Lundie, Edinburgh; Dr. A. P. Luff, Lond.

M.—Rev. F. H. Murray, Chislehurst; Manchester Corporation, Town Clerk of; Mr. A. MacFarlan, Helensburgh; Maltine Manufacturing Co., Lond.; Messrs. Macmillan and Co., Lond.; Mr. W. Mackie, Elgin, N.B.; Dr. G. R. Mackenzie, Edinburgh; Messrs. Maple and Co., Lond.; Mutual Life Insurance Company of New York, Lond., General Manager of; Dr. A. A. Moore, South Hetton; Mr. Sanderson Mellor, West Malling.

N.—Dr. A. Newsholme, Brighton; Dr. J. Niven, Manchester.

P.—Dr. G. Parker, Bristol; Dr. A. G. Paterson, Ascot; Dr. G. H. Philipson, Newcastle-on-Tyne; Mr. Norman Porritt, Huddersfield; Surgeon-Major J. J. Pratt, Fyzabad, Oudh, India; Mr. Y. J. Pentland, Edinburgh; Pathological Laboratory, Cambridge; Mr. F. T. Paul, Liverpool.

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THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 20th, 1897.

THE HOSPITALS OF THE METROPOLIS AND THEIR CLAIMS ON THE PUBLIC.

THE OLD STORY.

ONCE more it becomes our duty to lay before the readers of THE LANCET and the general public, for whose charitable consideration this Annual Special Supplement is as much prepared as it is for that of our customary professional audience, the claims of the Metropolitan Hospital Sunday Fund upon the sympathy and practical assistance of all London. Nor need the readers of this appeal consider that it is only Londoners to whom the London hospitals may fairly look for aid. Local hospitals have a right and pre-eminent claim upon local purses, but if local purses can spare a tribute to the metropolitan institutions, such help should be offered, for the London hospitals receive daily and uncomplainingly patients from all parts of the United Kingdom.

We have made this appeal for the Fund on ten previous years. Therefore, although we have approached the subject from different directions on different occasions, and have dwelt at length now on this and now on that phase in the history of hospital work in the metropolis, we feel that to many the subject has, perchance, become threadbare It may even have lost its interest for them altogether through this familiarity, for, vary the rendering of it how we will, our main tale must always be the same. The hospitals of London do noble work; the amount of work is out of proportion to their precarious incomes; London, the city of untold wealth, should be able to furnish not only adequate but regular hospital accommodation for its suffering poor; Hospital Sunday gives the inhabitants of the metropolis and all others on whom the London hospitals have any claim, logical or sentimental, a regular and annual opportunity of showing their appreciation of the splendid work done by these charities; therefore, let all give according to his or her means.

The rich should give out of their bounty, and not only because they are rich, but because they are directly benefited by the hospitals. It must not be forgotten that many of the accidents dealt with in the emergency wards of the London hospitals have befallen the wealthy, who are exposed as much or even more than humbler citizens to the risks of the streets. The poor should give out of their poverty, and they need no reminding what the hospital means to them when they are sick. To the benevolent-minded no scheme can commend itself as more worthy of their aid than a fund to benefit their suffering and poorer brethren. Lastly, in the eyes of the practical, no less than in those of the benevolent, the Fund must find favour, for it represents order in the distribution of charity, while it strengthens the voluntary system of hospital support, of which we are all properly proud.

SPECIAL FEATURES OF THIS YEAR'S APPEAL.

In this our eleventh appeal to the charity of the public in behalf of the Metropolitan Hospital Sunday Fund, we have to take into consideration two entirely new factors that must influence the minds of contributors. The first of these is the selection by the Prince of Wales of the metropolitan hospitals as the fittest object of national munificence in commemoration of the glorious and prolonged reign of his Royal mother. Such an appeal as that made by the Prince of Wales can hardly fail in some directions to militate against the chances of the Metropolitan Hospital Sunday Fund. We do not yet know to what figure the sums given in response to this appeal will attain, so that we cannot yet estimate how far the fund may be looked upon as a stop gap only, however efficient and sorely needed, or how far it will constitute a fund the capitalisation of which will place the hospitals benefiting thereby beyond the reach of poverty—at least, so long as existing conditions hold good. But whether the appeal result in the substantial permanent benefit which we all hope it may, or only in a sum adequate to relieve the more pressing needs of the hour, it must in either case appear to the charitable public as a rival to the Metropolitan Hospital Sunday Fund, or rather as a fund which they may prefer to the Metropolitan Hospital Sunday Fund without altering the direction of their charity. Yet it is perfectly clear that it is a bounden duty, imperative upon all who can afford the dole, to support both funds, and in no way to let the older charity go to the wall because of the more special and (may we be allowed most respectfully to say?) more sensational circumstances which surround His Royal Highness's appeal.

The second factor which will for this year, and not only for this year but possibly for many years to come, be at war with the Metropolitan Hospital Sunday Fund is the feeling that is abroad that the hospitals themselves

stand in need of reform, institutional, domestic, pecuniary, and even scientific. It is sad, indeed, that any such idea should be rife, for it is based upon insufficient evidence and is the outcome of conclusions many of which are unwarranted and a few of which are absurd. That defects can be found in the management of some of our metropolitan hospitals is not to be denied; we are not even prepared to contradict the assertion that certain of these hospitals are entirely unnecessary and so form but excrescences on the tree of proper charitable endowment; but we uncompromisingly assert that, as a whole, the metropolitan hospitals are deserving of all support, and that whoever hints to the contrary is inspired by ignorance or worse. The movement for what is known as "hospital reform" is one to which we have lent support in work. On the other hand, certain long-felt and well-founded beliefs that this work is much crippled by the perpetual abuse to which the charity of the hospitals is subjected have this year found a loud voice, and the careless listener might think that institutions against which serious indictments of mismanagement were being brought had forfeited public confidence. We hope to show that there is nothing in either circumstance that should jeopardise the collection for the Metropolitan Hospital Sunday Fund for 1897. We hope to show that no one who rightly understands either the truth of the Prince's wishes or the questions included under the phrase "hospital reform" ought to allow his usual subscription to be withheld or diverted from the Metropolitan Hospital Sunday Fund.

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1896.

TABLE I.—GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients.*

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Charing-cross	1,054	2,119	721	1,225	70	150	165	21,567	10,170
French	383	879	181	582	28	41	47	17,619	884
German	479	1,745	638	865	369	99	113	46,757	2,118
Great Northern Central	479	1,476	342	882	97	104	148	63,738	4,453
Guy's	815	6,209	5,070		621	432	599	80,862	37,368
Hampstead	115	301	51	229	3	24	18	1,886	219
Italian	72	253	—	—	—	13	—	16,729	—
King's College	1,581	2,703	967	1,057	187	185	205	66,664	13,197
London	3,833	10,733	3,373	5,885	1,243	645	1,024	294,052	112,869
London Homœopathic	163	1,031	253	521	50	80	68	26,587	597
Phillip's Memorial Homœopathic	34	83	20	76	4	5	—	3,384	4
London Temperance	700	1,157	202	802	—	—	88	17,508	11,281
Metropolitan	479	1,013	150	681	—	68	114	87,295	9,101
Miller Hospital and Royal Kent Dispensary	263	305	59	176	12	14	24	33,928	5,144
North-West London	383	578	—	—	19	48	—	28,545	5,673
Poplar	441	820	33	719	52	60	48	23,624	—
Royal Free	910	2,070	1,767		179	142	161	96,951	17,332
St. George's	1,438	4,027	3,363		1,076	290	385	92,620	12,936
SS. John and Elizabeth	96	96	70	25	23	46	23	—	—
St. Mary's	1,917	3,711	943	2,225	307	239	338	89,968	16,621
Seamen's Hospital Society	958	2,616	733	1,600	15	193	191	67,624	—
The Middlesex	2,254	3,598	2,023		863	289	355	113,491	—
University College	1,342	3,020	675	1,696	336	177	278	40,512	20,177
West Ham	288	589	109	365	12	37	55	75,949	8,664
West London	575	1,725	1,581		—	93	144	80,875	—
Westminster	1,150	2,696	2,288		394	172	236	—	10,580
	£22,152	55,514	9,520	19,591	5,490	3,655	4,827	1,498,735	309,388
Estimated to supply omissions	—	—	6,546	10,906	97	70	50	86,000	9,573
Total	£22,152	55,514	16,066	30,497	5,587	3,725	4,877	1,584,735	318,961

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

THE LANCET, so that it would be pusillanimous of us to be unprepared to discuss its meaning and possible influence; but before doing so we would premise that there is nothing in the abuses to which loud attention is now being called that is either new or of a character that would warrant even the most canny among the subscribing public in drawing tight their purse-strings.

Such are the special circumstances which mark our present and eleventh appeal to the public in behalf of the Metropolitan Hospital Sunday Fund. His Royal Highness the Prince of Wales, with a sense of the fitness of things that should be an element in the character of all princes, and for the possession of which he himself is famed by universal acclamation, has made subscription to the metropolitan hospitals in this year of extraordinary jubilee an act of loyalty and fealty to the most remarkable crowned head in Europe, and his selection of the metropolitan hospitals as the vehicle by which honour may be done to our revered and beloved Sovereign is a warranty of the enormous prestige that these institutions enjoy for unselfish and noble

THE METROPOLITAN HOSPITAL SUNDAY FUND AND THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

"I am aware that the task of distributing the funds when collected will not be without its difficulties. It may be desirable in the future to seek the assistance of representatives chosen by the hospitals, but for the first year we shall rely upon the coöperation of the Distribution Committee of the Hospital Sunday Fund."—*Extract from H.R.H. the Prince of Wales's circular letter to the Press announcing the institution of his Hospital Fund for London.*

As the support of the Prince of Wales's Fund grows larger public interest in his beneficent scheme grows deeper. And this interest is of a twofold character, as we have already pointed out in THE LANCET. There is interest as to the amount of the Fund that is to signalise so great an event as the prolongation of the reign of Her Majesty to sixty years, and there is almost equal interest in the principles on which it is to be used and distributed.

It is impossible even at this very late date to form any precise conception as to the amount that will be realised by the subscriptions to the Prince of Wales's Fund. Some three weeks ago it was announced that sums had been received as donations and subscriptions, commuted or otherwise, representing an income of about £22,000 per annum; but since that date

the Jubilee Stamps have been issued, and have, we understand, met with a satisfactory sale, while every day the receipt has been advertised of large sums and small sums from all sorts and conditions of men. Hospitals, in fact, have never received subscriptions from so many individuals as they will receive through the powerful agency of His Royal Highness's Fund. The extraordinary jubilee of their venerable Queen has appealed with a commanding effect to all her people; and as a result, whatever the total of the subscriptions in answer to the Prince's appeal may amount to, there can be no doubt as to the number of subscribers.

The class from which the Prince of Wales's Fund has received support has been as varied as the sums subscribed. And this is as it should be. Primarily, the hospital is the gift of the well-to-do to the poor—of the man who, being able in his own home to obtain medical and nursing skill for himself, is desirous of providing the same medical and surgical skill for his poorer neighbour when overtaken by grave accident or disease. But secondarily the British hospital is a national institution, of which all should be proud and to which all should subscribe, for there is no country in the world that can show any institution like it for valuable and unselfish work. Do we sufficiently consider what the voluntary hospital system means, and what the community would lose by placing the hospitals upon the municipal rates, by making them depend upon subsidies enforced, for example, from public entertainments, or by quasi-exalting them into the stations of a new Government department? These, or some combination of these, are the alternatives of the voluntary system—a system of which the whole nation should be proud. The spontaneity of the large annual gifts and bequests to our hospitals stands out pre-eminent in a not unselfish age as a grand testimony to the right-thinking generosity of the wealthy, as a proof not to be gainsaid that the sympathy of the rich with the poor and of the whole with the sick is not merely of the lip, but proceeds from the heart also. Yet it would be wrong to bolster up the voluntary system, however morally splendid, if it were found to be unworkable in a practical world. Most of the hospitals are practically at their wit's end for money. Now it may be asserted: If so, the voluntary system must have broken down. The endowed charities must have lost or mis-spent their endowments, and they, together with the unendowed which have ceased to justify their existence in the eyes of the charitable, must come upon the rates. We do not think so. This is not the place to discuss the problems of State-supported hospitals and the need for a hospital board, and no attempt will be made to do so. But a few words may be said to show that in the opinion of the thoughtful the voluntary system is the best. In the year 1890 the House of Lords appointed a Special Committee to investigate the whole subject of hospital administration and accommodation in the metropolis, and that Committee, after deliberation which extended over two years, during which it received the assistance of a large number of highly competent witnesses versed in the various branches of the subject, produced a report. Although dealing with a great number of topics, this report was mainly directed towards proving how greatly the work of the hospitals would be expedited, how enormously it would be advanced by improved organisation—by a knitting together, in fact, of all the institutions into one coöperative whole; but not a word was said against the voluntary system. More order and uniformity of administration were found to be desirable under the system, but against the system itself *not a word was said*. And, indeed, the advantages of the system stare us in the face. No man can obtain appointments at our hospitals in return for services rendered other than medical; the influence of politics is unfelt in our treatment of pneumonia; and red-tape is not a ligature that is employed in our wards. If the hospitals were supported out of the rates they would be, no doubt, economically managed; for, in spite of ill reports occasionally prevalent, we are all satisfied with our municipal governments. But municipal government is not the rule that is aptest for scientific institutions. It has been abundantly proved that municipal authorities are not faultless or firm judges of medical procedure. Local influences interfere with uniformity of treatment, and are particularly pliable before the blast of vain doctrine. Experimentation in foolish methods might be made to figure as enlightened freedom from prejudice if certain of our municipalities had the right to rule our hospitals. We may consider that the Prince's appeal forms another powerful argument in favour of the voluntary system, for had he entertained any doubt upon this point, or had he been advised that there was any difference of opinion among men of experience on this point, we may be certain that provision would have been made for the answer of possible objections.

We have spoken of the vast number who will this year subscribe to the needs of the hospitals through the medium of the Prince's appeal, as well as through the Metropolitan Hospital Sunday Fund. We now have to say a few words as to the quality of the new subscribers. The Prince's scheme is bringing into the line of hospital supporters thousands, with means ample or narrow, who have hitherto not contributed—rather probably from want of thought than from want of heart. It has been always one of the mysteries in connexion with the support extended to hospitals that it has been offered by so few. It has seemed an insoluble puzzle that thousands of people who could well afford to give something should every day of their lives pass hospitals to which they never contribute a farthing, and that their consciences have never seemed to reproach them for their neglect. The Prince has brought the needs of the metropolitan hospitals home to these thoughtless ones. The daily list and the prevailing sentiment lead us to hope that by the institution of the Prince's Fund a permanent blow has been struck at this indifference, and that consequently the hospitals of London will henceforth be less straitened in their endeavours to meet the really urgent cases of the classes for whom they were intended, because they will henceforth be able to depend upon a wider sympathy.

The value of these small subscriptions from a large number of people can hardly be over-estimated. If we glance at the table below, in which is summarised the practical progress of the Metropolitan Hospital Sunday Fund, we are immediately confronted with the fact that individual generosity has played an enormous part in the collections, and that the people of London have in no way levied a voluntary rate upon themselves to support their voluntary hospitals:—

Progress of the Metropolitan Hospital Sunday Fund.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1885	£34,320	£2555 [2]
1874	29,936	1505	1886	40,399	4817 [3]
1875	26,396	1424	1887	40,607	4130 [4]
1876	27,042	1339	1888	40,379	3080
1877	28,082	947	1889	41,744	3482
1878	24,904	1199	1890	42,814	3991 [5]
1879	26,501	1120	1891	45,330	9019 [6]
1880	30,423	1567	1892	41,512	4429 [7]
1881	31,856	1638	1893	39,290	3852 [8]
1882	34,146	2106	1894	43,679	7717 [9]
1883	33,935	1980	1895	60,361	21,990 [10]
1884	39,329	6410 [1]	1896	46,035	1672 [11]

[1] In 1884 £4500 was received from the managers of the International Health Exhibition.

[2] In 1885 a special donation of £1000 was received from Dr. James Wakley, Editor of THE LANCET.

[3] In 1886 a further special donation of £1000 was received from Dr. James Wakley.

[4] In 1887 a legacy of £1000 was paid by the executors of the late Dr. James Wakley.

[5] Including legacy of £1003 14*s.* from the executors of the late Mr. Thomas Crouch.

[6] In 1891 donations of £5000 from the late Duke of Cleveland, &c., and £1000 from Sir Savile Crossley, Bart., were received.

[7] In 1892 Sir Savile Crossley, gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Price of Brighton.

[8] In 1893 Sir Savile Crossley gave a further donation of £1000.

[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late Mr. W. J. Whitaker, and Sir Savile Crossley gave a further donation of £1000.

[10] In 1895 Messrs. Barnato and Friends gave a donation of £10,000; £3400 was received from the Stock Exchange through Messrs. Pym, Vaughan, and Co., and Messrs. Burdett and Harris; Lord Iveagh gave a donation of £1000; Sir Savile Crossley gave a further donation of £1000; and Mr. J. B. Robinson gave £1000.

[11] In 1896 Sir Savile Crossley gave his sixth donation of £1000, and legacies were received from Mr. John Smith of £500 and Mrs. May Evans of £172 9*s.* 4*d.*

In 1890 the individual donations only amounted to £3991 out of a total of £42,814, so that this year may be taken as marking a high level of general generosity—that is to say, a low level of special contributions. What did it amount to? The collections by offertory came to nearly £39,000, and the population of the metropolis at that time was nearly 4,200,000, so that the average contribution of every individual would amount to something *less than twopence-farthing*. For the purpose of this estimate it is assumed that only the County Council's London is interested in the hospitals of the metropolis. But that is very far from the fact. Outside the official boundary lies a densely populated zone inhabited by Londoners, although nominally appertaining to the adjacent rural districts, and

to this area are extended in no small measure the benefits of the metropolitan hospital system. Let it, however, suffice to assume, without refining upon the figures, that Londoners were in 1890 prepared to support this great charitable work—the financing of their hospitals—to the extent of an annual subscription of twopence-farthing a head, which particular annual subscription registers general generosity at full work.[1] This is by no means an unfair way of other hand, the benefits conferred by hospitals are considered, it will, of course, be found that these are in a preponderating measure realised by the most numerous and least wealthy classes of the community. The families, including children, of the poor are no less dependent than the families of the rich upon medical attendance, and to a very large extent in the case of poor people this necessity is supplied by hospitals. An estimate of population, therefore,

TABLE II.—SPECIAL HOSPITALS.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest	1,006	938	818		10	116	121	69,231	—
Hospital for Consumption	1,543	1,595	1,133		234	258	204	71,166	—
North London ,,	345	—	—	—	—	—	—	—	—
Royal Hospital for Diseases of Chest	383	714	318		36	66	63	24,696	—
Royal National Hosp. for Consumption	287	810	676	—	—	134	32	—	—
Alexandra Hospital for Hip Disease	173	174	27	64	38	67	4	1,605	—
Children's Home Hospital (Barnet)	33	88	27	53	—	12	—	—	—
Belgrave Hospital for Children	144	314	251		—	20	34	8,900	24
Cheyne for Incurable ,,	144	69	7	5	15	50	6	—	—
East Lond. Hosp. for ,,	431	1,496	245	819	142	83	265	67,350	19,621
Evelina Hosp. for Sick ,,	431	627	362		64	50	151	19,289	505
Home for Incurable ,,	67	32	—	—	5	26	1	—	—
Home for Sick ,,	144	—	—	—	—	—	—	—	—
Hospital for Sick ,,	795	1,901	548	634	—	—	190	77,629	—
North-East. Hosp. for ,,	287	705	94	523	67	50	88	55,149	2,262
Paddington-green for ,,	144	481	400		82	36	45	45,656	2,117
Victoria Hospital for ,,	575	1,448	1,190		482	97	104	55,125	400
Victoria Home, Margate	29	22	10	6	—	15	1	—	—
"The Vine"	29	41	9	6	25	22	—	—	—
British Lying-in Hospital	38	202	—	—	—	—	1	—	—
City of London Lying-in Hospital	72	493	—	493	—	19	—	—	—
Clapham Maternity	19	355	—	354	3	16	—	15,666	—
East-end Mothers' Home	67	233	—	232	—	9	1	2,740	—
General Lying-in	53	—	—	—	—	—	—	—	—
Queen Charlotte's Lying-in	288	1,151	1,141		87	51	10	7,854	—
Chelsea Hospital for Women	288	590	510		—	32	3	10,120	—
Hospital for Women	412	644	322	265	67	53	12	24,341	—
Grosvenor Hosp. for Children and Women	105	92	44	41	3	3	1	10,776	—
New Hospital for Women	201	502	—	—	—	500	8	30,220	—
Royal Hosp. for Children and Women	220	—	—	—	—	—	—	—	—
Samaritan Free	527	578	156	339	60	31	21	25,356	—
Cancer	575	829	725	—	10	75	105	13,786	—
London Fever	728	874	730		—	128	16	—	—
Gordon for Fistula	38	242	10	209	—	13	1	3,964	—
St. Mark's ,,	38	237	29	192	—	14	1	4,500	—
National for Diseases of Heart &c.	54	144	94	58	6	20	9	9,767	—
Female Lock	153	708	603	—	5	105	2	—	—
Male ,,	—	—	—	—	—	—	—	—	—
Hospital for Epilepsy &c.	58	89	—	—	4	20	3	11,429	—
National for the Paralysed &c.	824	851	460		86	157	48	35,043	—
West-End for Nervous System	105	272	227	42	—	—	—	28,522	—
Central London Ophthalmic	33	197	—	—	7	10	1	26,227	206
Royal Eye	182	426	9	417	—	21	—	46,737	—
Royal London Ophthalmic	537	2,006	362	1,500	12	45	1	130,374	1,500
Royal Westminster ,,	90	558	537		—	21	—	28,397	—
Western ,,	44	165	61	83	6	5	—	24,088	403
City Orthopædic	77	204	50	144	—	10	1	9,000	—
National ,,	62	227	172		—	52	3	2,614	—
Royal	77	153	114	45	—	44	—	3,190	—
Royal Sea Bathing Infirmary	335	574	305	131	—	110	8	38	—
Hospital for Diseases of Skin	10	—	—	—	—	—	—	—	—
St. Peter's for Stone	19	474	463		—	13	11	32,717	—
Central London Throat and Ear	48	302	34	246	4	12	6	40,000	—
Hospital for Diseases of Throat	29	519	32	435	14	16	12	42,753	500
Royal Ear	6	276	—	—	—	—	—	8,834	—
The Dental	125	—	—	—	—	—	—	57,654	—
National Dental	110	—	—	—	—	—	—	—	—
Estimated to supply omissions	£13,662	26,672	4,833	7,439	1,573	2,707	1,594	1,183,703	27,538
	—	1,989	5,360	6,157	497	155	99	127,182	1,394
Total	£13,662	28,561	10,193	13,596	2,070	2,862	1,693	1,310,885	28,932

estimating the position, for although it is quite true that a charge of whatever kind distributed evenly over the entire population in proportion to the number of heads would bear very unduly upon the poor, yet if, on the affords the best means of realising how the benefits of the hospital service are distributed, for no class is excluded from these benefits; and when it is realised that the return made in the form of the Metropolitan Hospital Sunday Fund works out at something less than twopence-farthing a head, it will, we think, be freely admitted that there is good reason for regarding it, not only as inadequate to the needs of the hospitals, but also as unworthy of the community which

[1] The figures for the year 1896 would have formed perhaps a better example, but the enormous increase in the population of London during the six years' interval makes any difference between the two sets of figures insignificant.

contributes it. This is a view of the case which should commend itself especially to persons of moderate means. To these the Metropolitan Hospital Sunday Fund has for four and twenty years afforded a peculiarly fit opportunity of tendering support to the medical charities of London of which no real advantage has been taken. These are the people of whom we may hope that the Prince of Wales's appeal has interested them now and for the future in the principal charitable work of the kingdom. Thousands of persons in London are so situated that the subscription list with its regulation guinea is not for them. The annual collections of the Metropolitan Hospital Sunday Fund have been brought to their notice in vain. Probably (and we most heartily hope that this will be the case) the Prince of Wales's appeal will fall on more alert ears, and will bring to the aid of the hospitals the many possessors of moderate incomes who have hitherto invariably held aloof from subscribing, if they have not as rigidly abstained from seeking gratuitous medical advice. It is from this class that the donations to the Metropolitan Hospital Sunday Fund ought not to be represented by twopence-farthing. Undoubtedly the Prince of Wales's Fund should stimulate many of this enormous class to take a practical interest in the hospitals of the metropolis, which should eventuate in considerably enlarging the circle from which subscriptions may be expected to the Metropolitan Hospital Sunday Fund.

The administration of the Prince of Wales's Fund concerns those interested in the welfare of the Metropolitan Hospital Sunday Fund more deeply than does the amount to which it may attain. It would seem that the future form and use of the Fund are spoken of as if these were still matters for further consideration. If this be so there is wisdom in the want of a definite plan. Time is thus given to study public opinion and the real questions that are at stake in any movement for helping voluntary hospitals and placing them in an unassailable position in public opinion. If the voluntary system of support is satisfactory in the eyes of all who can see clearly—and this we believe—it must not be

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Metropolitan Convalescent	623	3,414	1,222	2,107	—	82	3	—	—
Bexhill "	287	1,650	462	1,186	—	—	2	—	—
All Saints "	527	3,581	—	—	—	116	3	—	—
Mrs. Gladstone's "	96	743	—	—	—	—	—	—	—
Hahnemann "	38	148	40	100	—	17	1	3,399	—
Herbert "	29	457	240	151	—	40	2	—	—
Herne Bay (Baldwin-Brown) Convalescent	24	304	—	—	—	—	—	—	—
Herne Bay Mothers' Home	38	373	—	—	—	—	—	—	—
Homœopathic Convalescent	10	196	—	—	—	6	—	—	—
King's College "	81	524	82	414	—	16	—	—	—
Mrs. Kitto's "	86	311	—	—	—	—	—	—	—
London and Brighton Female Convalescent	38	2,341	—	—	—	33	1	—	—
Mary Wardell Convalescent	102	273	—	—	—	—	—	—	—
Morley House "	144	—	—	—	—	—	—	—	—
Princess Frederica's Convalescent	—	—	—	—	—	—	—	—	—
St. Andrew's (Clewer) Convalescent	172	585	—	—	—	46	10	—	
Do. (Folkestone) "	249	1,996	—	—	—	—	—	—	—
St. John's Home for Convalescent Children.	67	289	—	—	—	—	—	—	—
St. Joseph's Convalescent Home	53	544	424	115	—	48	5	—	—
Convalescent Home for Poor Children, St. Leonards-on-Sea	105	826	—	—	—	—	—	—	—
St. Michael's Convalescent	38	156	—	—	—	—	—	—	—
Seaside "	134	—	—	—	—	—	—	—	—
Warley "	8	45	45	44	—	—	—	—	—
Beckenham Cottage Hospital	53	150	22	114	—	8	6	—	—
Blackheath and Charlton Cottage Hospital	67	141	38	73	—	16	8	3,105	40
Bromley, Kent, "	80	286	59	183	—	19	18	—	56
Chislehurst, Sidcup, &c. "	43	113	27	73	—	11	2	—	11
Eltham "	32	60	5	50	4	5	3	—	11
Enfield "	38	90	6	68	—	9	4	—	21
Epsom and Ewell "	56	132	13	111	17	10	8	—	12
Hounslow "	24	65	15	38	—	2	9	3,583	65
Reigate and Redhill "	53	223	24	175	20	19	2	—	53
Sidcup "	32	98	12	76	1	5	2	188	17
Wimbledon "	38	128	17	100	—	5	6	120	23
Woolwich and Plumstead "	30	70	15	38	4	7	5	40	30
Establishment for Gentlewomen	105	134	14	110	—	10	4	—	—
St. Saviour's Hospital and Nursing Home	48	76	86	29	—	11	6	—	—
National Sanatorium for Consumption	57	282	205	—	—	60	3	—	—
Invalid Asylum	53	187	—	16	5	25	1	—	—
Firs Home	38	59	29	—	—	15	15	—	—
Friedenheim Home for the Dying	192	131	18	—	—	33	80	—	—
St. Catherine's Home	29	27	21	—	—	11	6	—	—
	£4,017	21,208	8,091	5,371	51	685	215	10,435	339
Estimated to supply omissions	—	1,805	5,886	7,499	—	207	11	360	—
Total	£4,017	23,013	8,977	12,870	51	892	226	10,795	339

revenues of the Metropolitan Hospital Sunday Fund should be chiefly drawn. Large contributions are the exception of course, but they bear too high a proportion to the total. The very poor have always acknowledged the claims of the hospitals upon their gratitude, and it would be a sad day when these struggling ones withdrew from the support of the Fund and left it to be carried on by the opulent few. But the many have not really supported the metropolitan hospitals. The rich have now and again made stately donations, and we are not oblivious of several instances of princely generosity that have characterised the eleemosynary record of the past year. The very poor have done their best, as is shown by the offertory returns of the Metropolitan Hospital Sunday Fund and the contents of the contribution boxes. But between the rich and the poor—particularly if we say between the very rich and the very poor—lies the enormous class of persons who could support the hospitals adequately if they would, and whose annual forgotten that inasmuch as many of our hospitals are on the verge of bankruptcy, the system must be held to having broken down to some extent, and the weak spot in the system is very obvious. The irregularity with which the impulse to give must necessarily act deprives the donations of half their value. The voluntary principle is an admirable one, but it is jealous of order or dicipline, and prefers to act locally, impulsively, and irregularly. If certain much-needed qualities could be introduced into voluntary hospitals, if they could be brought to regard each other as coöperating for charitable ends, not merely competing with each other for public subscriptions, if they could be brought to realise certain common principles of administration, a new era of prosperity might be assured to them. In almost these identical words we have on several occasions summed up certain phases in the career of the metropolitan hospitals, and we are therefore glad to believe that there will be an opportunity given to those who will have the administration

of the Prince's Fund to initiate some scheme of the nature of a Central Hospital Board.

There are in addition two or three principles which doubtless His Royal Highness and his colleagues and advisers will bear in mind. The first of these is to do nothing in promoting their own most popular Fund to damage the existing agencies by which hospitals are supported, pre-eminent among which stands the Metropolitan Hospital Sunday Fund. As will be seen by the summary given on page 1653, the Metropolitan Hospital Sunday Fund, which has now existed for a quarter of a century, has raised a very large sum of money, close upon £900,000, while its average receipts during the last decade represent the interest upon over a million of money. This means that

TABLE IV.—DISPENSARIES.

Name of Dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£67	24,000
Bloomsbury "	12	—
Brixton, &c.	57	25,335
Brompton Provident	26	7,255
Camberwell "	96	98 654
Camden	13	8,9.0
Chelsea, Brompton, and Belgrave Provident	45	4 218
Chelsea Provident	12	3,195
City	83	24,600
City of London and East London	54	—
Clapham General and Provident	29	12,554
Deptford Medical Mission	14	24,805
Eastern	35	16,903
East Dulwich Provident	19	14 496
Farringdon General	43	17,786
Finsbury	53	42,146
Forest Hill	38	7,101
Gipsy Hill and Upper Norwood	5	—
Hackney Provident	7	631
Hampstead "	44	25,897
Holloway and North Islington	62	27,655
Islington	43	54,137
Kensal-town Provident	10	5,100
Kensington	67	18,266
Kilburn, Maida-vale, and St. John's-wood	38	3,277
Kilburn Provident Medical Institution	29	—
London	17	7,969
London Medical Mission	48	—
Marylebone Medical Mission	—	—
Metropolitan	48	38,399
Notting-hill	16	1,582
Paddington Provident	34	11,191
Pimlico "	15	—
Portland-town	14	1,120
Portobello-road Provident	6	—
Public	48	14,685
Queen Adelaide's	34	21,051
Royal General	41	—
Royal Pimlico Provident	48	74,549
Royal South London	53	19,345
St. George's and St. James's	48	—
St. George's (Hanover-square)	38	7,878
St. John's-wood and Portland-town	34	20,000
St. Marylebone General	43	21,585
St. Pancras and Northern	43	6,839
South Lambeth, Stockwell, & North Brixton	43	13,234
Stamford-hill, Stoke Newington, &c.	53	29,913
Tower Hamlets	35	12,067
Walworth Provident	11	4,210
Wandsworth-common Provident	9	3,600
Westbourne Provident	14	11,243
Western	58	23,076
Western General	129	27,983
Westminster General	29	7,903
Whitechapel Provident	19	20,338
	£1,998	861,452
Estimated to supply omissions	—	360,549
Total	£1,998	1,222,001

the Metropolitan Hospital Sunday Fund is now recognised as a permanent agent for stimulating hospital charity and wisely supervising its administration. The Prince of Wales would not, we know, desire to interfere with the ordinary subscriptions to such a fund of those whose steady benevolence has been the reliance of hospital treasurers in the past. We have heard rumours that funds are to be diverted from their ordinary channels into the Prince of Wales's Fund, to which we have to say that such action would appear to us in the light of a particularly mean proceeding, the favour of Royalty being placed above all sentiments of true charity. To give to the Prince of Wales's Fund the subscriptions usually given to the Metropolitan Hospital Sunday Fund is merely saving with one hand to be lavish with the other, and the Prince of Wales would desire no such sycophantic rejoinders to his appeal. That the Prince's Fund is in any way in opposition to the Hospital Sunday Fund is, in fact, expressly contradicted by himself in his circular letter, while the same is sufficiently clearly shown by the reliance which His Royal Highness is placing this year upon the coöperation of the Distribution Committee of the latter Fund in the extremely delicate task of distributing the proceeds of the first extraordinary appeal.

So much, then, for the supposed antagonism between the two Funds. His Royal Highness has opened up new fields of practical benevolence, and we are certain would be the first to regret that an appearance of competition should lead to any serious diminution in the subscriptions of the senior Fund. Both Funds have the same object, and it would be but a poor compliment to Prince or Queen to rob the Fund which has a history of twenty-four years' excellent utility to swell the total of the Jubilee offering. For this year, at any rate, the Prince's Fund may be looked upon as a magnificent adjunct to the Metropolitan Hospital Sunday Fund. What future years may bring forth we cannot guess. We do not know how long the distribution of the Prince's Fund will be left to the Metropolitan Hospital Sunday Fund. We do not know how far the receipts will be treated as capital to pay off the pressing liabilities of some hospitals or how far they will be invested with a view of forming a permanent income. We do not know if any attempt will be made to formulate some common scheme of use for the money, such as a Central Board would insist upon before distribution. But we are certain that it would have powerfully contributed to the success of the Prince's Fund if it had been confined and concentrated in respect of the duration of the appeal, for the continuation of it into future years must tend to detract from its success. And we are also certain that nothing can be further from His Royal Highness's wishes than to imperil the regular prospects and the established income of the older fund, and that in his eyes no gift could have any merit which had been withheld from the Metropolitan Hospital Sunday Fund to be poured into the coffers of the Jubilee appeal. Both by word and deed the Prince of Wales has disclaimed any rivalry.

THE METROPOLITAN HOSPITAL SUNDAY FUND AND THE HOSPITAL REFORM ASSOCIATION.

"We are of opinion that considerable abuse exists among these special hospitals in the following ways: (1) By the treatment, either free or for a small sum, of a patient who could afford to pay a reasonable fee outside; (2) by the admission of patients who do not actually require treatment by a specialist; and (3) by the treatment in some instances of more patients in a given time than can be considered either advisable or defensible."—*Extract from the Report of the Committee of the Hospital Reform Association on the Working of the Special Hospitals of London.*

The mere existence of a Hospital Reform Association would seem to be an argument against generosity to any fund designed to assist hospitals, and if the Metropolitan Hospital Sunday Fund were not in some senses a disciplinary body as well as a charitable body, undoubtedly the argument would be a valid one. But the care which has always been taken in the distribution of moneys received has made the Fund a practical deterrent of some forms of hospital abuse—that is, a sort of Hospital Reform Association. For the Distribution Committee of the Fund, by putting a premium upon good management and economy, and by rigidly exacting that all hospital accounts shall be rendered for their inspection in accordance with a uniform plan, stimulate the less scrupulous institutions to set themselves in order lest they should fail to obtain a grant.[2] This year those responsible for the distribution of the receipts of the Fund have had a communication made to them from the Hospital Reform Association, which previously appeared in

[2] "Your Committee have this year had occasion to question the administration of nineteen institutions. Each of these have been given the opportunity of sending a deputation in conference. Your Committee are, however, glad to report that in most cases the objections raised were frequently explained satisfactorily. There are now very few institutions which do not publish their accounts on the uniform system agreed upon. One special hospital, having no present need, gets no award. One convalescent home, where the charge for maintenance of patients was deemed excessive, has no award recommended. The managers of an institution, classed as a dispensary, were requested by your Committee to produce their minute book. This they declined to do, and your Committee being doubtful of the existence of any such book have recommended no award. The result of all their interviews will, your Committee hope, lead to improvement in the future."—*Extract from the Report of the Distribution Committee of the Metropolitan Hospital Sunday Fund for 1896.*

the columns of THE LANCET, and which can hardly fail to attract attention from them. The Hospital Reform Association appointed a committee to inquire into the working of the special hospitals in the metropolis, and it is the report of this committee to which we refer. The report was an interesting document, and showed that the newly formed Association perceived the responsible nature of the work that it had assumed. For in these critical times for hospitals it is necessary to recognise, firstly, their value, and, secondly, the danger there is of their altogether losing their original character and with it their claims as charitable institutions of the first order. The authors of the report, while ready to admit, if not the virtues of special hospitals, at least the virtues of those who represent them, pointed out in clear words the reluctance of some officials to give information as to their institutions, and published in a tabular form some statements which should either be explained or denied. Certain contradictions of these statements have reached us, but, giving them their full value, we still find that the Hospital Reform Association has justified its inquiry by demonstrating the need for further inquiry.

Looking at the financial system on which a large number of the special hospitals are worked, the Hospital Reform Association has in the report of its committee stated that many of them are largely dependent on the payments of patients. Of the forty-one special hospitals visited, at least thirty were shown to receive direct payments from their patients, the receipts from this source amounting in 1895 to £24,085, and over half of these institutions obtained more money from patients than from annual subscribers. One institution received twenty-five times as much from its patients as from its subscribers. At another it was open to the medical officers to see private patients, and it was not easy to ascertain who decided which were private and which were hospital cases. At another the income derived from patients' payments was nine times as large as that derived from annual subscriptions, and the authorities appeared by the report to be accommodating in their charges to out-patients, who may be called upon to pay on a sliding scale from 6*d*. to 10*s*.

The conclusion is irresistible that at certain of these institutions charges are made so that, while medical and surgical practice is being carried on in unfair competition with the practitioner, the institutions are losing their character as charities. As soon as a hospital begins to charge its out-patients fees, however small, it must cease to base its chief claim to help from the Metropolitan Hospital Sunday Fund upon the large number of out-patients which it treats during the year. An imposing tale of sick relieved is in such cases counterbalanced by commensurate addition to the funds of the institution, and it will behove the Distribution Committee of the Metropolitan Hospital Sunday Fund to look more closely into this matter than they have ever done. Insistance on a wage limit, with occasional departures from it at the discretion of a competent inquiry officer, might do good; the total abolition of the system of subscribers' letters would also have its advantages; while the staffs of the hospitals can do much to avert the promiscuous abuse of the charities. But we place implicit confidence in the discretion of the Distribution Committee. They can be relied upon not to shirk the difficulties of their position—if we thought otherwise we should not year by year do our utmost to swell the sum with which they will have to deal—and they can be trusted to apportion the moneys with justice.

In view of the urgent importance that the question of hospital abuse has now assumed, THE LANCET this year addressed the following question to the secretaries of all the metropolitan institutions who benefited last year by the collections of the Metropolitan Hospital Sunday Fund: "*Is it your opinion that any considerable proportion, and can you say what proportion, of hospital out-patients are in a position, were they so disposed, to obtain private medical advice?*" To this question we received 60 answers. From the general hospitals 14, from the special hospitals 22, from convalescent homes 4, and from dispensaries 20. Of the 14 replies from the general hospitals, 5 acknowledged the presence of abuse and 9 denied it. In those where it was acknowledged to be present it was stated to be "infinitesimal," "very small indeed," or "quite an insignificant number." In two of those where its presence was denied the improbability of the existence of much abuse was based upon consideration of the fact that the crowded waiting-rooms were so uncomfortable that it was unlikely that any who could afford to go to a private medical man would care to subject themselves to the inconvenience of the hospital. This we do not consider at all a good ground for doubting the presence of abuse, for it is notorious that mean people daily subject themselves to grave inconveniences to escape their just liabilities. (By the way, if these waiting-rooms are really so very uncomfortable they form no fit places wherein to receive the sick, whether worthy objects of charity or not.) Of the 22 answers from special hospitals 7 deny *in toto* that abuse takes place, while 15 admit the possibility of abuse, but in several cases qualify their admissions by saying that the abuse is "very slight," "infinitesimal," or "a decimal percentage." In more than one of these hospitals it appears that the strictest precautions are taken to prevent abuse, the out-patients being visited at their own homes to see what their real circumstances are, while strict inquiry is instituted into the means of all new patients. Of the 4 letters from convalescent homes 3 speak of the possible existence of abuse. Of the 20 letters from dispensaries, 3 deny the presence of abuse and 17 admit it, the amount being very variable. On the one hand we read of "many unfit cases," "30 per cent. of abuse," and "a large proportion able to pay"; and, on the other, we read of "only a very small percentage," or "10 per cent.," of improper cases presenting themselves, the abuse being "very small" or infinitesimal." One curious little discrepancy in the replies could not fail to attract attention. At one dispensary no patient is eligible whose means exceed £2 weekly, while at another the wage limit for a single man is fixed at £1 to avoid abuse. Here someone has blundered.

The conclusion we have come to on perusing these letters in connexion with the report of the Hospital Reform Association is that it will be imperative upon the Metropolitan Hospital Sunday Fund to use all powers of discrimination to reward only such institutions as have a perfectly clean reputation. All trading upon charity of unnecessary hospitals must be abolished. The Metropolitan Hospital Sunday Fund will this year enjoy remarkable power, because the Distribution Committee will coöperate in the administration of the Prince of Wales's Fund. Therefore, this year they will be able to discriminate in a marked manner between the deserving and the undeserving institutions. And, for our part, we heartily desire that in any doubtful case their leaning may be towards severity. For there are many hospitals in the metropolis whose truly charitable character cannot be called in question, and whose pecuniary plight is so desperate that no amount of increase that might be conceived possible to the usual grant could be considered excessive. We should regret that any injustice should be done, but it is evident that any money diverted to one of these hospitals by erroneous sternness from an equally

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£22,152	55,514	16,066	30,497	5,587	3,725	4,877	1,584,735	318,961
Special Hospitals	13,662	28,561	10,193	13,596	2,070	2,862	1,693	1,310,885	28,932
Cottage Hospitals and Convalescent Homes	4,017	23,013	8,977	12,870	51	892	226	10,795	339
Dispensaries	1,998	—	—	—	—	—	—	1,222,001	—
Total	£41,829	107,088	35,236	56,963	7,708	7,479	6,796	4,128,416	348,232

meritorious hospital would still remain well-directed charity; while it is equally evident that to make a grant to an undeserving hospital by error or out of abundance of funds is to misapply trust money. We have every confidence that those in authority over the Metropolitan Hospital Sunday Fund will deal fairly and thoroughly with the very difficult question of "hospital abuse."

THE METROPOLITAN HOSPITAL SUNDAY FUND IN A YEAR OF EXTRAORDINARY CHARITABLE ENTERPRISE.

It is as an economising agency that the Metropolitan Hospital Sunday Fund has achieved its greatest success. At present there is no sure prospect of the creation of any Central Board, but the Council of the Metropolitan Hospital Sunday Fund have been in a position to accomplish much, by way of suggestion and criticism, to advance the interests of coöperation among the various charities for the London sick. The Council have exercised a gentle but by no means ineffective supervision over hospital expenditure, and by comparison and scrutiny enforce the doctrine that every pound of revenue must be represented by its equivalent in the form of service or of necessaries supplied to the objects of the charity. In this way they accomplish what no private benefactor could do were he never so assiduous to the ungracious task of criticism. The Council speak with the authority of numbers and are free from the suspicion of partiality in their strictures. In this way they effect what has never before been attempted, and in a very considerable measure succeed in a task in which success, though of vast importance, is singularly difficult of attainment. Their contributions thus have a double value, aiding in the support of the assisted institutions and contributing very materially to the economy of the whole revenues from whatever source derived.

The promoters of such work as this have a right to look forward in this, a year of extraordinary charitable enterprise, to an extraordinary measure of support. But circumstances have decreed that in place of these pleasurable anticipations they should be forced to ask themselves most concernedly whether they are likely to receive as large a sum as usual. We appeal most strongly to the public—to the rich, the well-to-do, and the poor alike—to respond to the claim that is made upon their charity in behalf of the Metropolitan Hospital Sunday Fund and to immediately *now*, *TO-DAY*, contribute all that can be spared to a worthy object. Particularly we would beg to insist upon the fact that the Fund represents not only the purest charity, but order in that charity. It is this fact which makes us regard the organised movement against "hospital abuse" as a factor that should work for the increase rather than the decrease of the contributions to the Metropolitan Hospital Sunday Fund; for the manner in which the Fund has been hitherto administered should be a guarantee to the public that their subscriptions will be used for the alleviation of the misery of fit objects of charity only.

We desire, then, in this the year which sees the preservation of Her Majesty Queen Victoria to reign over us for the unprecedented period of sixty years, to beg of our readers and the public that the Metropolitan Hospital Fund may obtain from them unprecedented support. Do not, we implore, let the claims of this Fund be forgotten. Subscribe freely to any other object of charity that is brought to your notice as a method of commemorating the great Jubilee year; but let such subscriptions be in excess of your ordinary charity, and pay to the Metropolitan Hospital Sunday Fund at least the tribute which you have hitherto paid.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1896.

Dr. RECEIPTS *for the year ending 31st October, 1896.*

1896.	£ s. d.	£ s. d.
To Balance at Bank of England, 1st Nov., 1895	1,216 10 11	
,, Balance in hands of Secretary	12 1 5	
		1,228 12 4
,, Collections made at Sundry Places of Worship	40,469 17 9	
,, Collections at Schools	32 4 0	
,, Donations, including £17 15s. 0d. for Surgical Appliances	3,582 18 1	
,, Legacies	672 9 4	
,, Dividend on £45,346 1s. 3d. 2½ Consols, per Executors to the Will of W. A. Gunesion, deceased	1,247 0 4	
,, Income tax refunded on Dividends to October, 1895	31 3 6	
		46,035 3 0
		£47,263 15 4

Cr. PAYMENTS *for the year ending 31st October, 1896.*

1896.	£ s. d.	£ s. d.
By Awards to 116 Hospitals	39,199 13 3	
,, Awards to 7 Institutions	517 5 10	
,, Awards to 54 Dispensaries	1,999 19 0	
,, Surgical Appliances	2,149 16 11	
		43,848 15 0
,, Rent	170 0 0	
,, Fuel, Gas, and Office Cleaning	22 11 4	
,, Printing and Stationery	260 17 11	
,, Stamps and Postage	98 5 9	
,, Advertisements	275 3 8	
,, Salaries and Wages	841 13 6	
,, Sundries	7 7 7	
		1,675 17 9
,, Special Expenses—Presentation Album to Henry C. Burdett, Esq.	31 10 0	
Special Church and Chapel Appeals	35 11 9	
		67 1 9
,, Balance at Bank of England	1,664 16 2	
,, Balance in hands of Secretary	7 4 8	
		1,672 0 10
		£47,263 15 4

Audited and found correct, this 17th day of November, 1896

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, 13, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.—ED. L.